KENWOOD

AUDIO VIDEO SURROUND RECEIVER

KR-V6090
KR-V5090

INSTRUCTION MANUAL

KENWOOD CORPORATION

This manual contains instructions for two models. Model availability and features (functions) may differ depending on country and sales area.

B60-2988-00 (CS) (T) [MC]
98/12 11 10 9 8 7 6 5 4 3 2 1 97/12 11 10 9 8 7 6

Before applying power

⚠ *Caution :Read this section carefully to ensure safe operation.*

Units are designed for operation as follows.

Europe and U.K. ..... ***AC 230 V only***

For the United Kingdom

Factory fitted moulded mains plug

1. The mains plug contains a fuse. For replacement, use only a 13-Amp ASTA-approved (BS1362) fuse.
2. The fuse cover must be refitted when replacing the fuse in the moulded plug.
3. Do not cut off the mains plug from this equipment. If the plug fitted is not suitable for the power points in your home or the cable is too short to reach a power point, then obtain an appropriate safety approved extension lead or adapter, or consult your dealer.
   If nonetheless the mains plug is cut off, remove the fuse and dispose of the plug immediately, to avoid a possible shock hazard by inadvertent connection to the mains supply.

IMPORTANT: The wires in the mains lead are coloured in accordance with the following code:
Blue: Neutral
Brown: Live
Do not connect those leads to the earth terminal of a three-pin plug.

Safety precautions

⚠ *Caution :Read this section carefully to ensure safe operation.*

WARNING : TO PREVENT FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

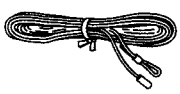
CAUTION RISK OF ELECTRIC SHOCK DO NOT OPEN	CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE, REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.
	THE LIGHTNING FLASH WITH ARROWHEAD SYMBOL, WITHIN AN EQUILATERAL TRIANGLE, IS INTENDED TO ALERT THE USER TO THE PRESENCE OF UNINSULATED "DANGEROUS VOLTAGE" WITHIN THE PRODUCT'S ENCLOSURE THAT MAY BE OF SUFFICIENT MAGNITUDE TO CONSTITUTE A RISK OF ELECTRIC SHOCK TO PERSONS.
	THE EXCLAMATION POINT WITHIN AN EQUILATERAL TRIANGLE IS INTENDED TO ALERT THE USER TO THE PRESENCE OF IMPORTANT OPERATING AND MAINTENANCE (SERVICING) INSTRUCTIONS IN THE LITERATURE ACCOMPANYING THE APPLIANCE.

Unpacking

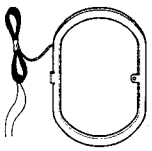
Unpack the unit carefully and make sure that all accessories are put aside so they will not be lost. Examine the unit for any possibility of shipping damage. If your unit is damaged or fails to operate, notify your dealer immediately. If your unit was shipped to you directly, notify the shipping company without delay. Only the consignee (the person or company receiving the unit) can file a claim against the carrier for shipping damage. We recommend that you retain the original carton and packing materials for use should you transport or ship the unit in the future.

Accessories

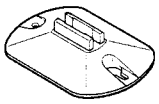
FM indoor antenna (1)



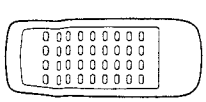
AM loop antenna (1)



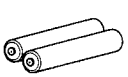
Loop antenna stand (1)



Remote control unit (1)



Batteries (R6/AA) (2)



Special features

DOLBY PRO LOGIC & DOLBY 3 STEREO

The surround system reproduces video software programs carrying the DOLBY SURROUND mark with similar acoustic effects to movie theaters.
The DOLBY PRO LOGIC mode controls the audio signals of the Front Left/Right, Center and Rear surround channels using the built-in directivity enhancer circuit to reproduce the feeling of sound motions very realistically.
The DOLBY 3 STEREO mode can reproduce the motions of sound even when only the front and center speakers are used, by providing proper acoustic position using the directivity enhancer circuit.

RS 3D Stereo

The SRS (Sound Retrieval System) is an innovative system simulating a 3-dimensional sound space, which features clearly improved feelings of depth, sound field extension and acoustic image positioning as well as a widened listening area.

DS (Radio Data System)

The RDS makes it possible to search stations according to their programme types (PTY search) so the tuner can receive a station of the selected kind automatically when the station starts broadcasting and returns to the previous station when it completes broadcasting (EON reservation). The RDS also displays information such as the PS (Programme Service name), RT (Radio Text) and CT (Clock Time).

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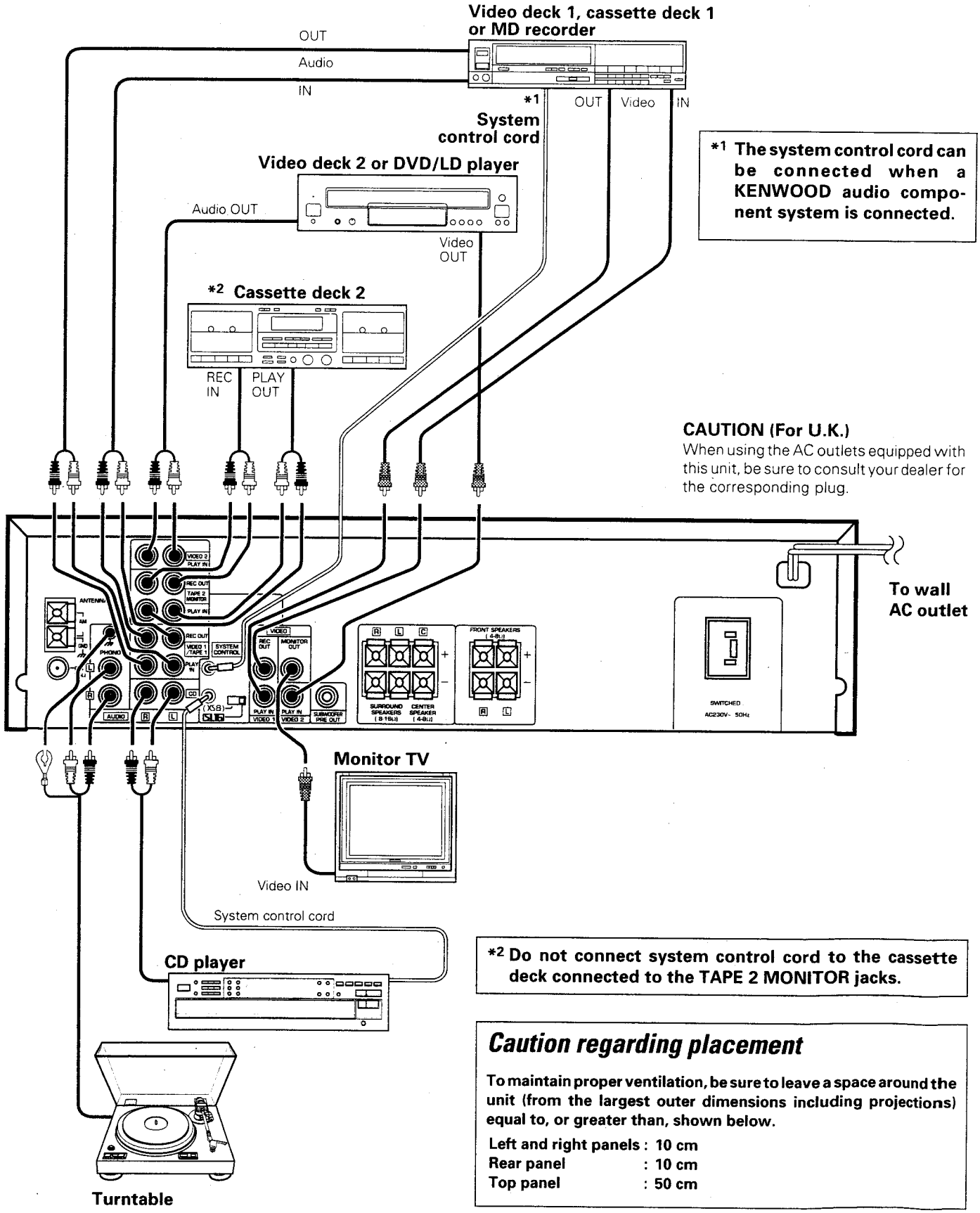
Connections of Audio and Video components

Make connection as shown below.
When connecting the related system components, refer also to the instruction manuals of the related components.

⚠ Do not plug in the power lead until all connections are completed.

Malfunction of microcomputer

If operation is not possible or erroneous display appears even though all connections have been made properly, reset the microcomputer referring to "In case of difficulty". →32



*1 The system control cord can be connected when a KENWOOD audio component system is connected.

*2 Do not connect system control cord to the cassette deck connected to the TAPE 2 MONITOR jacks.

Caution regarding placement

To maintain proper ventilation, be sure to leave a space around the unit (from the largest outer dimensions including projections) equal to, or greater than, shown below.

Left and right panels	: 10 cm
Rear panel	: 10 cm
Top panel	: 50 cm

About the system control connections

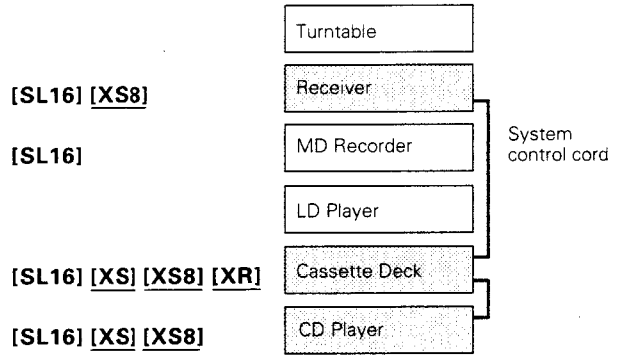
Connecting system control cords after connecting a KENWOOD audio component system lets you take advantage of convenient system control operations.
There are two KENWOOD system control modes. Make connections according to the groups of terminal symbols shown below.

[XS8] Mode: lets you combine [XR], [XS], and [XS8] terminals
[SL16] Mode: for [SL16] terminals only

This unit is compatible with both [XS8] and [SL16] modes. It comes from the factory set to the [SL16] mode. To switch to the [XS8] mode, follow the instructions in "SWITCHING BETWEEN [XS8] AND [SL16]" below.

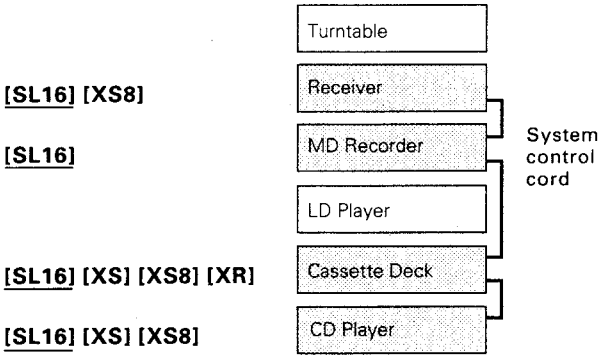
EXAMPLE: [XS8] mode connections

The underlined portion represents the setting of the system control mode.



EXAMPLE: [SL16] mode connections

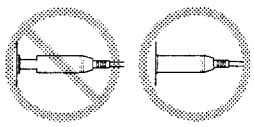
The underlined portion represents the setting of the system control mode.



- Some CD players and cassette decks are not compatible with the [SL16] system control mode. Be sure to use the [XS8] system control mode when making system connections with equipment that is not [SL16] compatible.
- Some MD players are not system control compatible. You cannot make system control connections to this kind of equipment.

Notes

1. [SL16] equipment cannot be combined with [XR], [XS], and [XS8] equipment for system operations. If your equipment consists of this kind of combination, please do not connect any system control cords. Even without system control cords, normal operations can be carried out without affecting performance.
2. Do not connect system control cords to any components other than those specified by KENWOOD. It may cause a malfunction and damage your equipment.
3. Be sure the system control plugs are inserted all the way in to the system control terminals.



ABOUT THE SYSTEM CONTROL OPERATIONS

Remote Control (possible when the system control mode matches)

Lets you operate source components with the system remote supplied with this unit.

Automatic Operation (Except [XR] equipment)

When you start playback from a source component, the input selector on this unit switches to that component automatically. (Except TAPE 2)

Synchronized Recording (Except [XR] equipment)

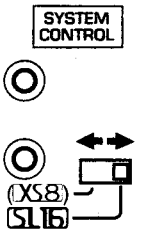
Lets you synchronize recording with the start of playback when recording from CD or MD.

SWITCHING BETWEEN [XS8] AND [SL16]

The system control mode can be switched over easily with the following operation.

❶ Ensure that the **MAIN POWER** switch on the main unit is **OFF**.
❷ Set the **SYSTEM CONTROL** switch on the rear panel of the main unit to the desired position.

Note

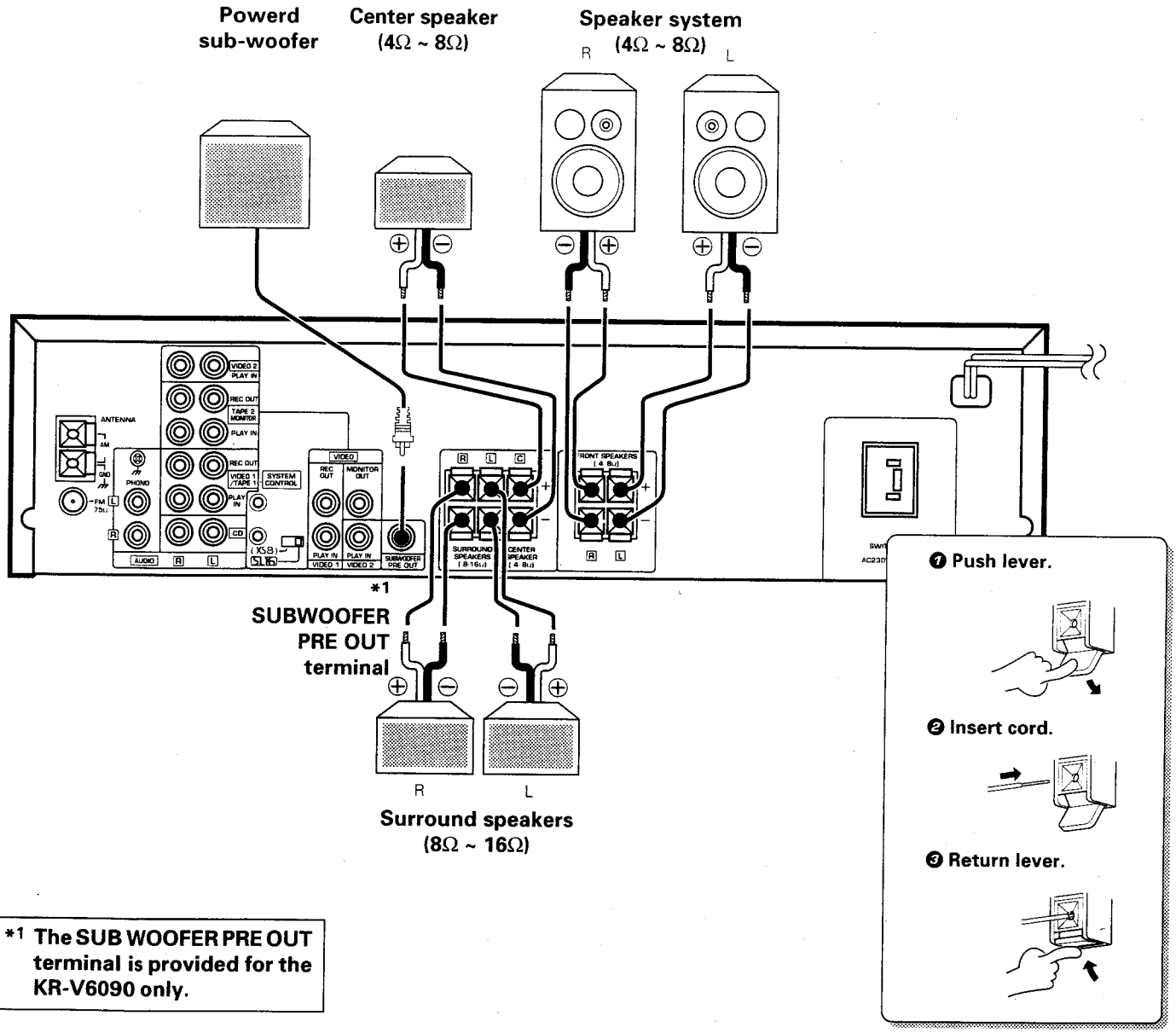


- This operation does not affect the items stored in memory.

Notes

1. Connect all cords firmly. If connections are loose, there could be loss of sound or noise produced.
2. When plugging and unplugging connection cords, be sure to first remove the power cord from the AC outlet. Plugging/unplugging connection cords without removal of the power cord can cause malfunctions or damage to the unit.
3. Do not connect up a power source which is larger than that indicated on the socket at the rear of the unit.
4. If the system control cords or audio cords are not connected properly, the remote control or automatic operation between system components will not work properly.

Connection of speakers



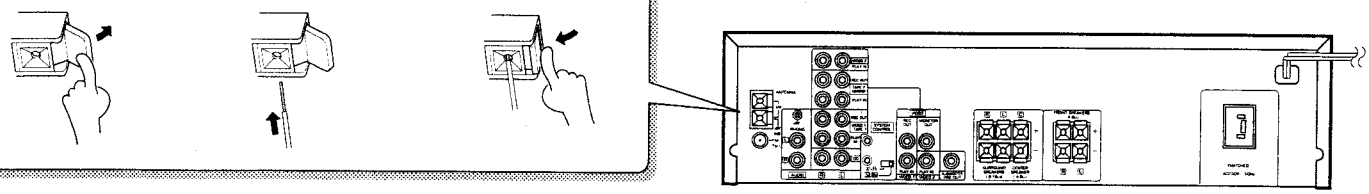
***1 The SUB WOOFER PRE OUT terminal is provided for the KR-V6090 only.**

- Never short-circuit the + and - speaker cords. For the symptom and remedy when a speaker cord is shorted. →32
- If the left and right speakers are connected inversely or if the speaker cords are connected with reversed polarity, the sound becomes unnatural with ambiguous acoustic image positioning. Be sure to connect the speakers and speaker cords correctly.
- Connect a sub woofer if you want to enhance the bass sound. The connected sub-woofer should be a power sub-woofer with a built-in amp.

Connection of antenna

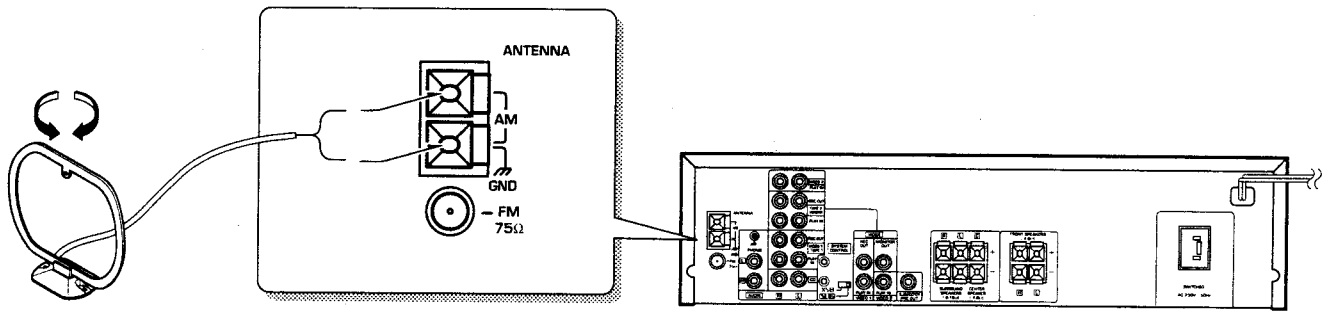
Connection method to each antenna terminal

❶ Push lever. ❷ Insert cord. ❸ Return lever.



IM loop antenna connection

ıe supplied antenna is for indoor use. Place it as far as possible from the ain system, TV set, speaker cords and power cord, and set it to a rection which provides the best reception.

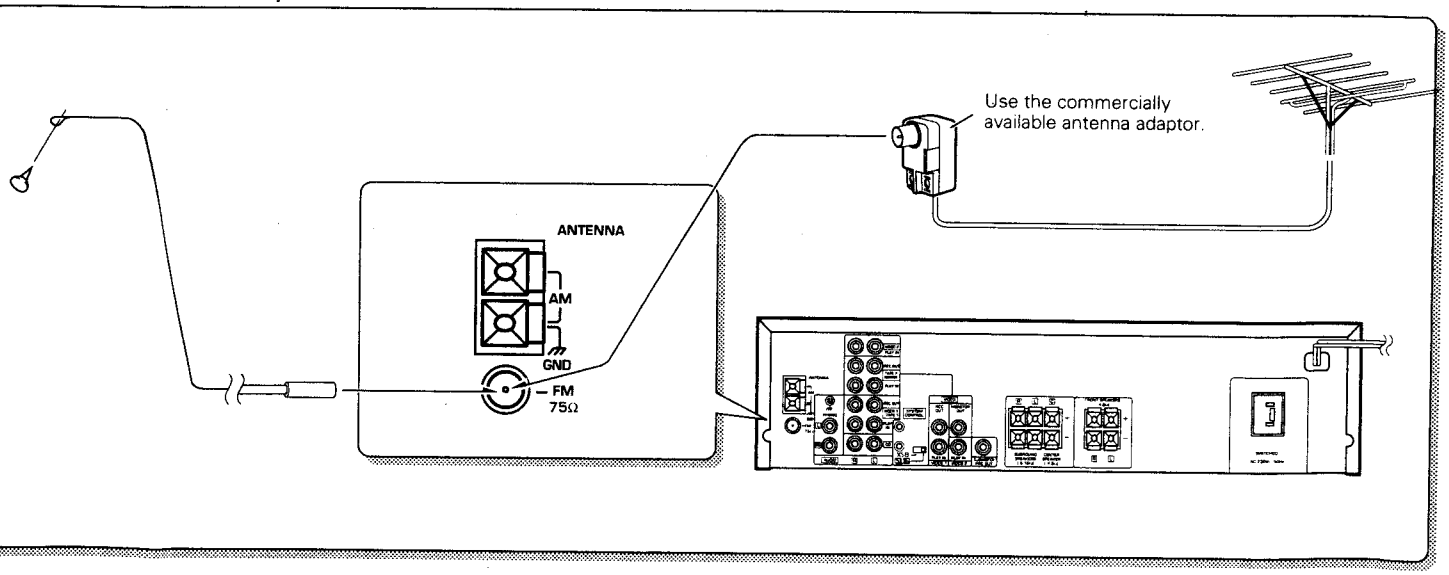


M indoor antenna connection

e accessory antenna is for temporary indoor use only. For stable signal ception we recommend using an outdoor antenna. Remove the indoor tenna if you connect one outdoors.

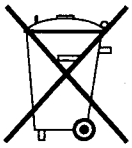
FM outdoor antenna connection

Lead the 75 Ω coaxial cable connected to the FM outdoor antenna into the room and connect it to the FM 75 Ω terminal.

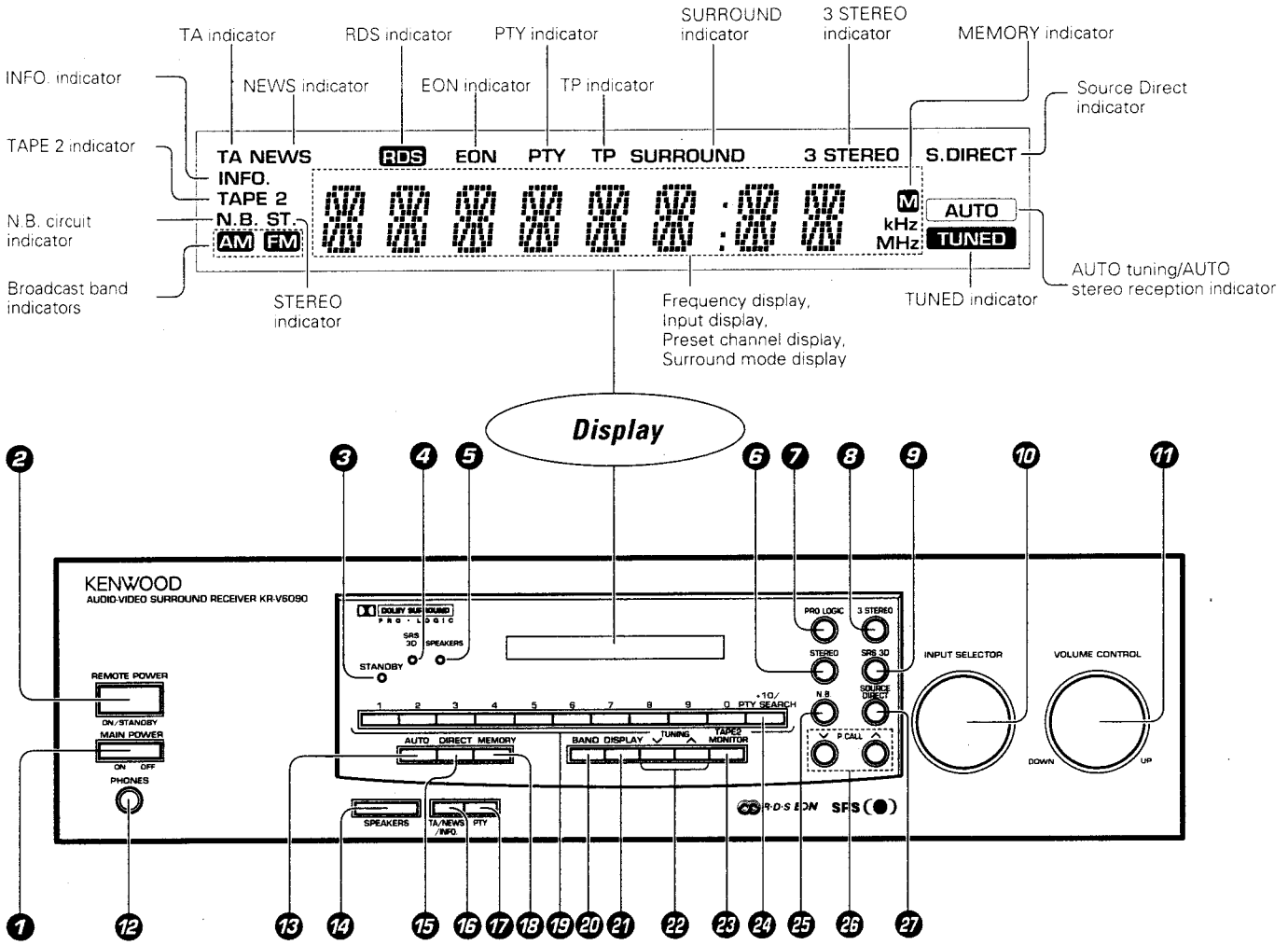


REQUIREMENT BY NEDERLAND GAZETTE

Batteries are supplied with this product. When the empty, you should not throw away. Instead, hand them in as small chemical waste.



Controls and indicators



1 MAIN POWER switch
Press to switch the main power ON/OFF.

2 REMOTE POWER key
Press to switch over the STANDBY/ON modes when the MAIN POWER is ON.

3 STANDBY indicator

4 SRS 3D indicator
Lights when the SRS 3D system is ON.

5 SPEAKERS indicator
Lights when the speakers are ON.

6 STEREO key →30
Press to turn the surround mode OFF.

7 DOLBY PRO LOGIC key →28

8 DOLBY 3 STEREO key →30

9 SRS 3D key →31

10 INPUT SELECTOR knob
Rotate to select the input source.

11 VOLUME CONTROL knob

12 PHONES jack
Plug headphones into this jack.

13 AUTO key
Press to select the tuning mode from the auto tuning and manual tuning modes. →17
Press and hold the **AUTO** key for more than 2 seconds to switch the VIDEO1 display to another input display. →12

14 SPEAKERS key
Press to turn the speakers ON and OFF.

15 DIRECT key →18
Press when tuning a broadcast station by entering the digits of its frequencies.

16 TA/NEWS/INFO. key →24
Used in receiving RDS broadcast.

17 PTY key →22
Used in receiving RDS broadcast.

18 MEMORY key →20
Used when storing RDS stations in the preset memory using the Auto Memory function. Also used when storing any radio stations manually. →21

19 Numeric keys (1 to 0, +10) →18

20 BAND key →18
Press to switch the broadcasting band.

21 DISPLAY key
Press to switch the RDS display contents. →19
Press and hold the DISPLAY key for more than 2 seconds to switch the display brightness.

22 TUNING keys (∨ , ∧) →17
Press to select a radio station.

23 TAPE 2 MONITOR key →16
Press to monitor the sound being recorded, etc.

24 +10/PTY SEARCH key →23
This key functions as the PTY SEARCH key during RDS broadcast reception.

25 N.B. key →14
Press to compensate for the insufficiency in the base sound.

26 P.CALL keys (∨ , ∧) →21
Press to select one of the preset stations.

27 SOURCE DIRECT key →14
Press to listen to the source sound with a higher sound quality.

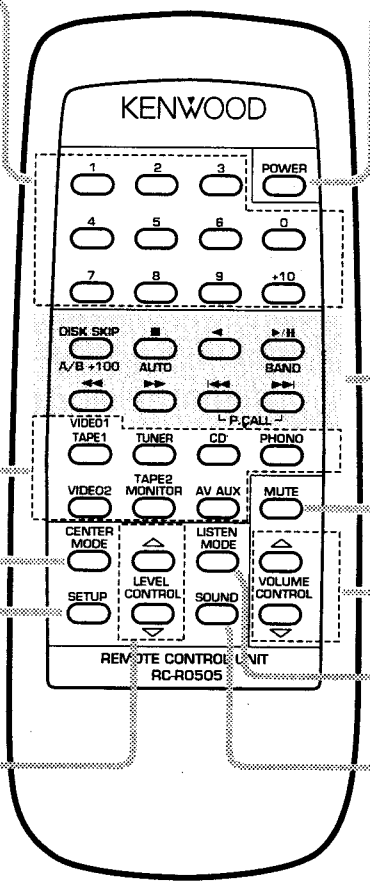
STANDBY position of the REMOTE POWER key

When the STANDBY indicator of this unit is lit after its power cord has been plugged into wall outlet and the **MAIN POWER** switch has been pressed to ON, a small amount of current is supplied to back up the internal memory of the unit. This status is referred to as the standby mode of the unit. While the STANDBY indicator is lit, the POWER can be switched between ON and STANDBY from the remote control unit.
When the unit is not to be used for a long period of time, press the **MAIN POWER** key to OFF.

Names of keys and their functions

The remote control unit provided with the receiver can also control KENWOOD cassette decks, CD player and MD recorder connected to the recieiver through system control cords. For details of the controllable functions, refer to the instruction manuals of these components.

Model: RC-R0505
Infrared ray system



Numeric keys
Used as the numeric keys of the input source component being selected.

INPUT keys
Press to select the input.

Note The **AV AUX** key cannot be used with the KR-V6090 and KR-V5090.

CENTER MODE key →28
Press to select the center mode in the DOLBY PRO LOGIC surround mode.

SETUP key →13 →28
Press to set up the balance or surround play.

LEVEL CONTROL keys →13 →28
Press to adjust the tone or during setup of the surround mode.

POWER key
Press to switch ON/OFF the power of this unit as well as the KENWOOD components connected to it through system control cords.

Refer to the remote control key correspondence table on the next page.

MUTE key
Press to mute sound temporarily.

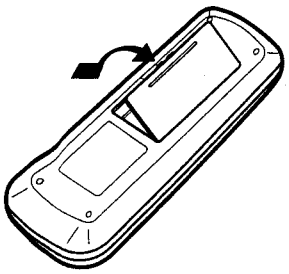
VOLUME CONTROL keys
Press to adjust the volume.

LISTEN MODE key →30
Press to select the type of the surround mode.

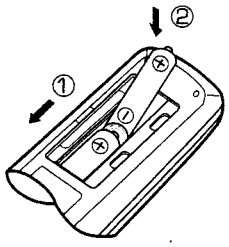
SOUND key →13 →31
Press to adjust the tone.

Loading batteries

❶ **Remove the cover.**

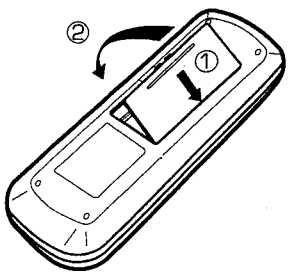


❷ **Insert batteries.**



- Insert two AA-size (R6 / SUM-3) batteries as indicated by the polarity marking.

❸ **Close the cover.**



Operation procedure

1 ***Switch ON the power of the main unit.***

2 ***Select the component to be remote controlled with one of the controlled component selection keys.***

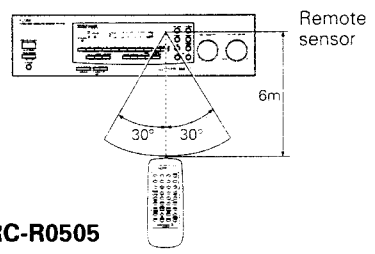
3 ***Refer to the remote control key correspondence table below and press the key for the desired operation.***

- Pressing the **POWER** key of the remote control unit while the STANDBY indicator is lit turns the power ON. Press the desired key after the power has been turned ON.
- When two operation keys of the remote control unit are pressed successively, press each key securely reserving an interval of more than 1 second for each press.

Remote control key correspondence table *(For KENWOOD component control mode)*

2 Controlled component selection key / 3 Operation key	TUNER	CD	TAPE1	TAPE1 *1 (When used with a MD)
⏮ ⏭ P.CALL	**P.CALL keys** Recalls preset stations.	**⏮ , ⏭ (Skip key)**	———	**⏮ , ⏭ (Skip key)**
■ AUTO	**AUTO key** Press to select the auto tuning mode.	**■ (Stop key)**	**■ (Stop key)**	**■ (Stop key)**
DISK SKIP A/B +100	———	**DISC SKIP key** Press to select the disc to be played.	**A/B key** Select TAPE A or B.	**+100**
▶/II BAND	**BAND key** Press to switch the broadcast band.	**▶/II (Play/pause key)**	**▶/II (Forward play key)**	**▶/II (Play key)**
◀◀ ▶▶	**◀◀ , ▶▶ (Tuning keys)** Press to tune broadcast stations.	**◀◀ , ▶▶ (Search key)**	**◀◀ , ▶▶ (Search key)**	**◀◀ , ▶▶ (Search key)**
◀	———	———	**◀ (Reverse play key)**	———

Approximate operating range



Model: RC-R0505
Infrared ray system

- *1: No remote control key is marked MD, but the **TAPE1** key can be used to control a MD player by switching the display of the main unit from VIDEO 1 to TAPE1 then to MD. →12

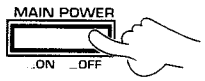
Notes

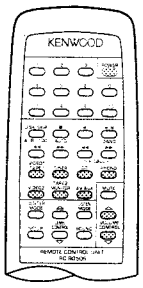
1. The supplied batteries are intended for use in operation checks. Therefore, their lives may be shorter than ordinary batteries.
2. When the remote-controllable distance gets shorter than before, replace both batteries with new ones.
3. Malfunction may occur if direct sunlight or the light of a high-frequency lighting fluorescent lamp enters the remote control light sensor. In such a case, change the system installation position to prevent the malfunction.

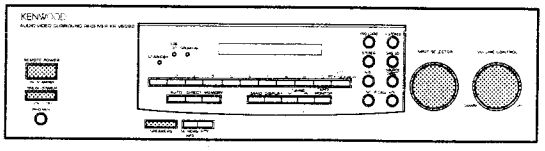
Playing music

Preparation

- Press the **MAIN POWER** key to ON.

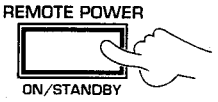




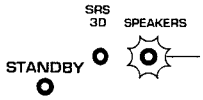


: Keys or controls to be used in this operation

1 Play a music source.



2 Select the SPEAKERS key setting.

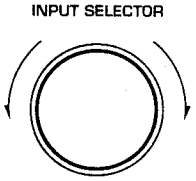


The SPEAKERS indicator should light up.

When the SPEAKERS indicator is ON:
The speakers connected to the SPEAKERS terminals on the rear panel output sound.

When the SPEAKERS indicator is OFF:
The speakers do not output sound. Use this setting when listening through headphones.

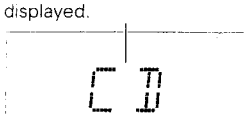
3 Select the input source.



The input sources are switched in the following order:

→ ① **TUNER** (frequency display)
② **PHONO**
③ **VIDEO1** (TAPE1 or MD)*1
④ **CD**
⑤ **VIDEO2** →

The selected source is displayed.



***1: Switching the VIDEO1 display to TAPE1 or MD display**
When a KENWOOD cassette deck or MD recorder is connected in the [SL16] system control mode, the VIDEO 1 input should be switched to the TAPE1 or MD input with the following operation.

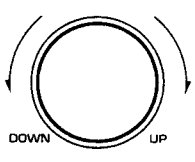
❶Select VIDEO1 with the INPUT SELECTOR.
❷Press and hold the AUTO key for more than 2 seconds to select TAPE1 or MD.

Note

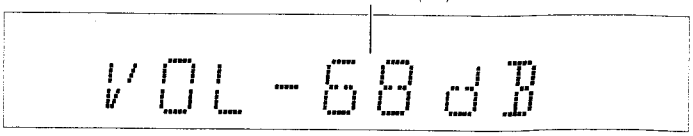
① **VIDEO1** → ② **TAPE1** → ③ **MD**

4 Play the selected source.

5 Adjust the volume.

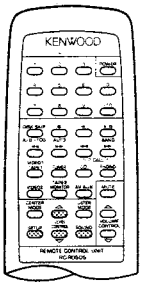


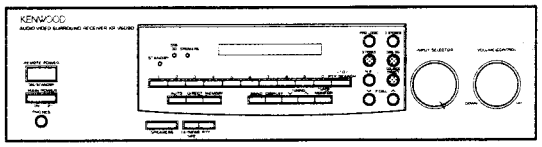
Volume level is displayed.



- The time taken till the volume level is displayed is variable depending on the current operating condition.
- Rotating the **VOLUME CONTROL** at a higher speed increases the amount of volume change (AI VOLUME function).
- The sound of input source cannot be listened to while **TAPE 2 MONITOR** is ON.

Sound adjustment functions



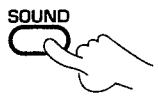


: Keys or controls to be used in this operation

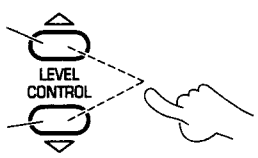
Adjusting the tone

❶ Ensure that the SRS 3D and S.DIRECT indicators are not lit.

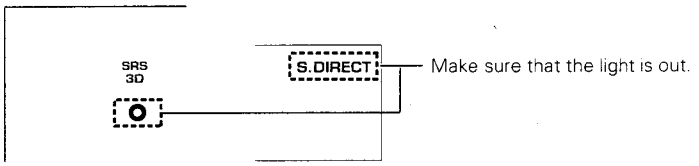
❷ Select the tone mode to be adjusted (from BASS, MIDDLE and TREBLE).



❸ Adjust the tone



The level can be adjusted between -8 and +8 with an increment or decrement of 2 per press.

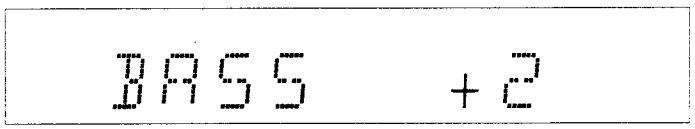


- If the S.DIRECT indicator is lit, press the **S.DIRECT** key to turn it off.
  If the SRS 3D indicator is lit, press the **SRS 3D** key to turn it off.

Each press of the key switches the modes as follows:
(When the SRS 3D Stereo is OFF)

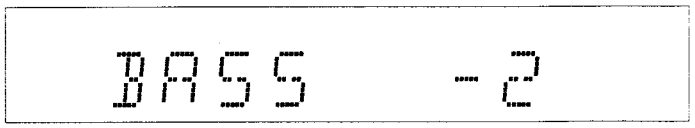
① **BASS** : Mode for adjusting the low frequencies.
② **MIDDLE** : Mode for adjusting the middle frequencies.
③ **TREBLE** : Mode for adjusting the high frequencies.
④ End of setting

- Adjustment of SRS (Sound Retrieval System) 3D Stereo →31



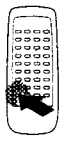
Display when "BASS" is selected.

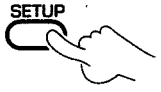
The displayed value changes.



Adjusting the left/right sound balance

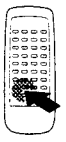
❶ Ensure that the SURROUND, 3 STEREO and S.DIRECT indicators are off.
❷ Press the SETUP key.

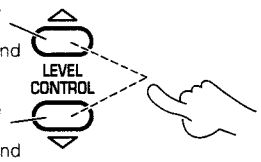




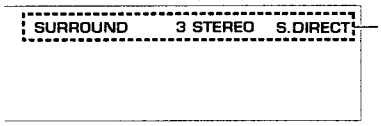
The balance adjustment display appears.

❸ Adjust the balance.

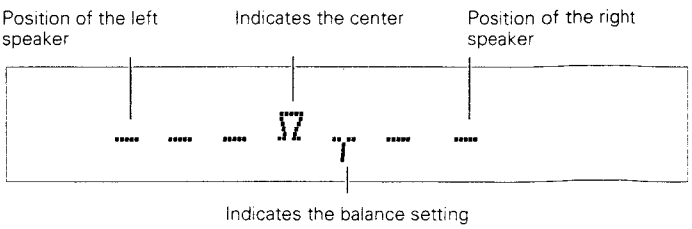


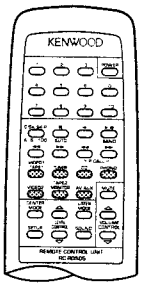


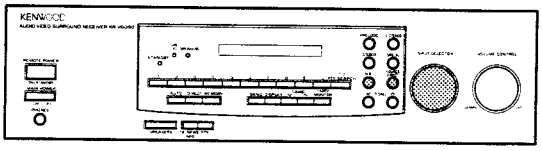
❹ Press the SETUP key once to return to the original source.



- If the SURROUND, 3STEREO or S.DIRECT indicators are lit, press the **STEREO** key to turn them OFF.







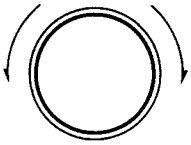
: Keys or controls to be used in this operation

Source Direct playback

This feature allows you to play the source signal with a high quality by passing it only through the minimum required circuitry.

❶ Choose the playback source.

INPUT SELECTOR



❷ Press the SOURCE DIRECT key.

SOURCE DIRECT

❸ Playback the source.

Lights

- During Source Direct playback, the tone controls (BASS,MIDDLE and TREBLE), balance control and N.B. are defeated.
- The Source Direct playback is canceled when any key associated with the surround play is pressed.

To cancel

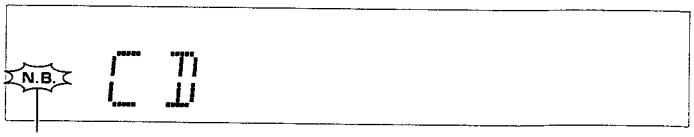
Press the SOURCE DIRECT key again.

Goes off

Compensating for low frequencies (N.B.: Natural Bass circuit)

N.B. circuit is used to compensate for the low frequencies which are less audible during low-volume listening.

N.B.



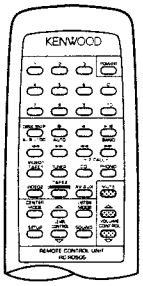
Lights

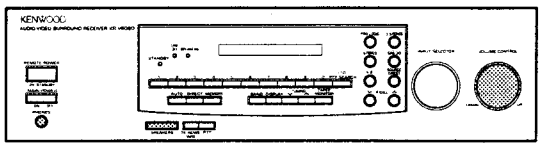
- When the S.DIRECT is selected, the N.B. control keys are not effective.

To cancel

Press the N.B. key again.

Goes off

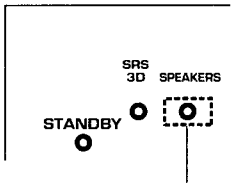




: Keys or controls to be used in this operation

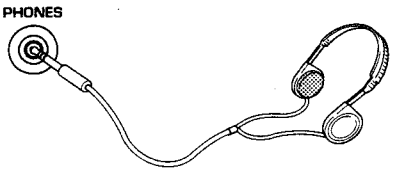
To listen through headphones

❶ Press the SPEAKERS key to OFF.

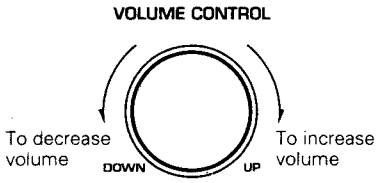


Make sure the light is out.

❷ Plug headphones.

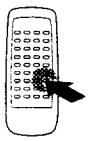


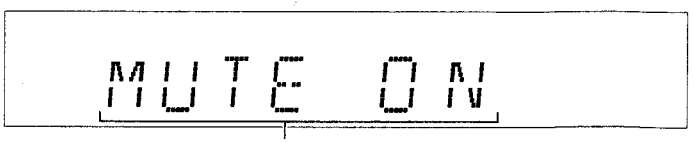
❸ Adjust the volume.



To mute sound temporarily

Remote control unit only





Blinks

To cancel

Press the MUTE key again.

Recording

When recording sound with a recorder component of KENWOOD, synchro recording is possible by setting the INPUT SELECTOR to select TAPE1 or MD according to the connected component.

Preparation

- Switch the VIDEO1 display to TAPE1 or MD with the following operation.

❶ Select VIDEO1 with the INPUT SELECTOR.
❷ Press and hold the **AUTO** key for more than 2 seconds.

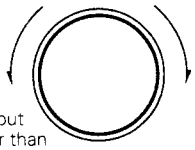
Each press switches the display.

① **VIDEO1** → ② **TAPE1** → ③ **MD**

To record a music source

❶ Select the source to be recorded.

INPUT SELECTOR



Select an input source other than TAPE 1.

❷ Put the cassette deck in record-pause mode.

❸ Play the source and start recording.

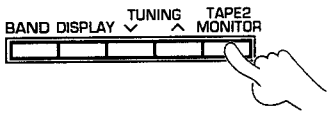
The input sources are switched in the following order:

① **TUNER** (frequency display)
② **PHONO**
③ **VIDEO1** (TAPE1 or MD)
④ **CD**
⑤ **VIDEO2**

- The VIDEO1 display can be switched to the display of other input by using the procedure described in "Preparation" above.
- For the synchro recording with a cassette deck and/or MD recorder, refer to the respective instruction manuals.
- It is not possible the VIDEO1 or MD input to TAPE1 because all of these components should use the same INPUT SELECTOR position.
- For the caution in EON reservation: →25

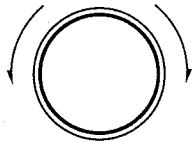
Copying tape (Tape dubbing TAPE 2 → TAPE 1)

❶ Press the TAPE 2 MONITOR key.



❷ Select a source other than TAPE 1.

INPUT SELECTOR



❸ Play cassette deck 2 and start recording on cassette deck 1.

Lights

- For copying a tape using a double cassette deck, read the instruction manual of the double cassette deck.

Copying tape (Tape dubbing TAPE 1 → TAPE 2)

❶ Select TAPE 1 with the INPUT SELECTOR control of the main unit.

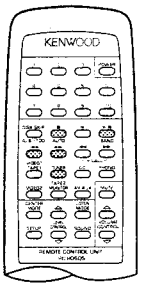
❷ Play the cassette deck connected to the TAPE 1 jacks and start recording of the cassette deck connected to the TAPE 2 jacks.

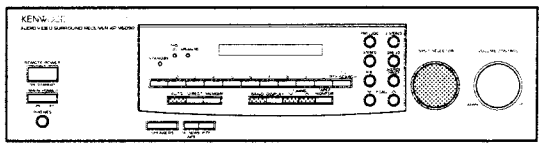
Regarding TAPE 2 MONITOR

A cassette deck or graphic equalizer can be connected to this unit's **TAPE 2 MONITOR** terminals. If you connect a graphic equalizer, turn the **TAPE 2 MONITOR** key ON. If you connect a 3-head cassette deck, you can monitor the source sound, or the sound being recorded, while recording. Pressing the **TAPE 2 MONITOR** key lets you compare the recorded sound and the source sound. Refer to the operating manual for the component you connected for further details.

Broadcast reception

**adio stations can be classified into RDS (Radio Data Sys-
em) stations and other stations. For listening to RDS sta-
ons or storing RDS stations in preset memory, see section
ntitled "Functions of RDS".** →19

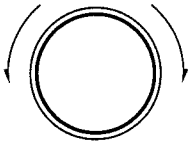




: Keys or controls to be used in this operation

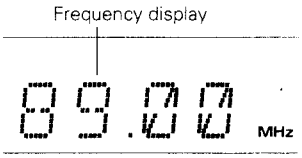
Receiving broadcast station (Except for RDS stations)

1 Select the TUNER input.



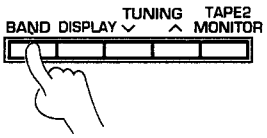
The input sources are switched in the following order:

① **TUNER** (frequency display)
② **PHONO**
③ **VIDEO1** (TAPE1 or MD)*1
④ **CD**
⑤ **VIDEO2**



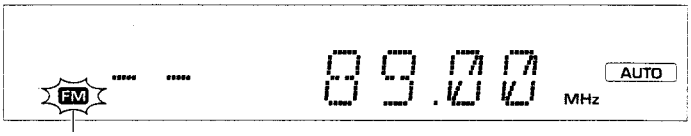
- The last frequency tuned before is displayed.
- *1: How to switch the display →16 →12

2 Select the broadcast band.



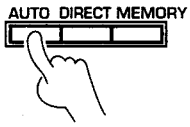
Each press switches the band as follows:

① **FM**
② **AM**



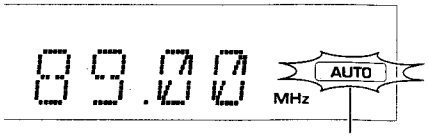
"AM" or **"FM"** indicator

3 Select the tuning method.



Each press switches the turning method as follows:

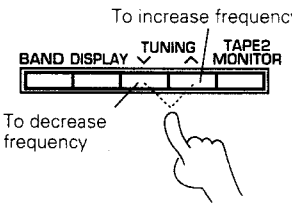
① **AUTO** lit (auto tuning)
② AUTO not lit (manual tuning)

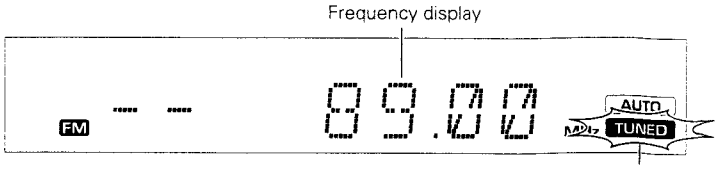


- Usually, set the switch to **AUTO** (auto tuning).

Select manual tuning when noise interferes due to weak radio wave. (The stereo broadcasting is received in monaural during manual tuning.)

4 Select a station.

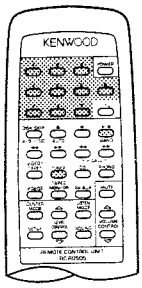


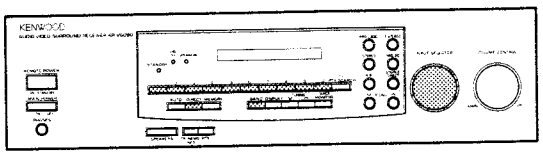


"TUNED" lights up when a station is tuned.

Auto tuning : The next station found is tuned automatically.
Manual tuning : Press repeatedly or hold until a station is tuned.

- The same operation is also available with the ⏪ and ⏩ keys of the remote control unit.

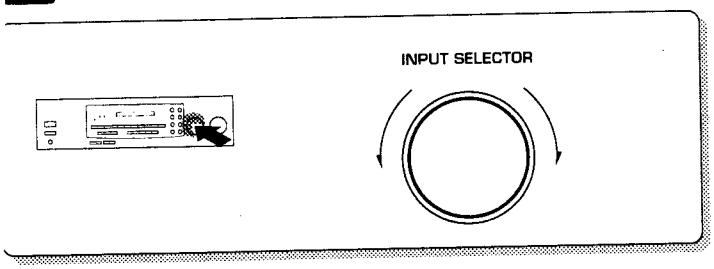




: Keys or controls to be used in this operation

Receiving radio stations by specifying its frequency

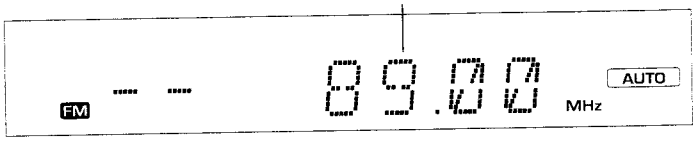
1 Select the TUNER input.



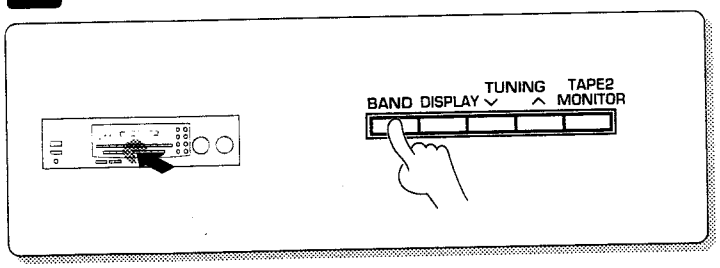
The input sources are switched in the following order:

1. **TUNER** (frequency display)
2. **PHONO**
3. **VIDEO1** (TAPE1 or MD)
4. **CD**
5. **VIDEO2**

Frequency display



2 Select the broadcast band.



Each press switches the band as follows:

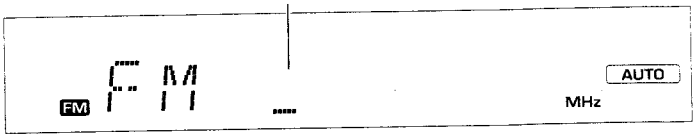
1. **FM**
2. **AM**

"AM" or **"FM"** indicator

3 Specify the frequency.

❶ Press the DIRECT key.

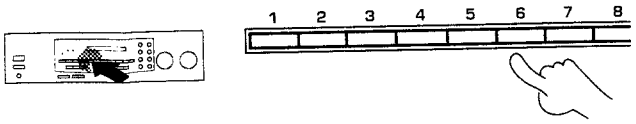
Blinks



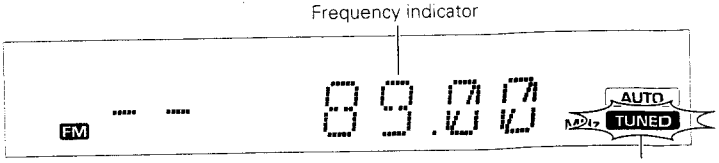
Press the numeric keys according to the frequency to be tuned as shown below.

AM 810 kHz ..... [8], [1], [0]
AM 1260 kHz ..... [1], [2], [6], [0]
FM 89 MHz ..... [8], [9], [0], [0]
FM 89.5 MHz ..... [8], [9], [5], [0]

❷ Enter the frequency of the desired station.



Frequency indicator



"TUNED" lights up when a station is tuned.

- If you make a mistake, the frequency display blinks for a few seconds. In this case, repeat step **3** from the beginning.

RDS (Radio Data System)

Functions of RDS

RDS is a system which transmits useful information (digital data) for FM broadcasts together with the broadcast signal. Tuners and receivers designed for RDS reception can extract the information from the broadcast signal for use with various functions such as automatic display of the station name.

Functions made possible with RDS

PTY (Program Type Identification) Search : →22
The tuner automatically searches for a station which is currently broadcasting a specified program type (genre).

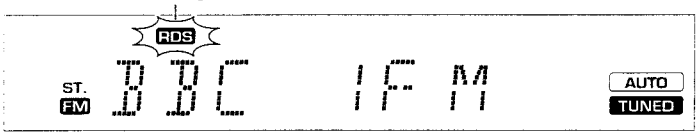
EON (Enhanced Other Network) reservation →24
By selecting one of the three kinds of programme previously, the tuner switches automatically to a station broadcasting that kind of program whenever it starts broadcasting. When the broadcasting completes, the tuner returns automatically to the originally-received station.

PS (Program Service Name) Display : See figure ① below.
When an RDS broadcast is received, the station name is automatically displayed.

RT (Radio Text) display :See figure ③ below.
Some of the RDS stations also transmit text data.
When the RT display is selected with the DISPLAY key, the broadcast text is scrolled on the display.

RDS Auto Memory →20
This function automatically selects the stations providing RDS broadcast and store them in the preset memory (up to 30 stations can be preset).

The **RDS** indicator lights up when an RDS broadcast (signal) is received.

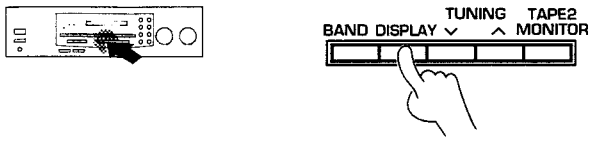


* Some functions may not be provided or be given different names depending on countries or areas.

Before using a function utilizing the RDS, be sure to perform the RDS Auto Memory operation by referring to the description in "Storing RDS stations automatically in the preset memory". →20

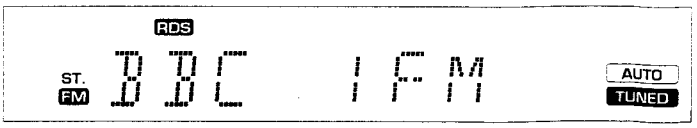
DISPLAY key

Pressing the DISPLAY key changes the display contents.

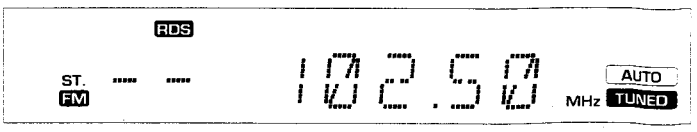


Display mode priority ranking
When an FM broadcast is received :
- ①**PS (Program Service Name) Display**
- ②**Frequency Display**
- ③**RT (Radio Text) display**

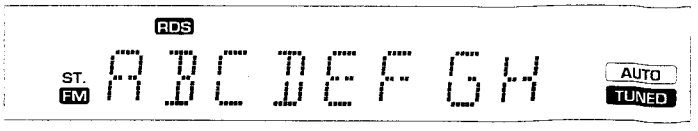
① **PS (Program Service Name) Display :**
When an RDS broadcast is received, the station name is automatically displayed.
If no PS data was sent, **"NO PS"** is displayed.



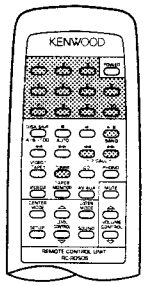
② **Frequency Display :**
The frequency of the current station is displayed.

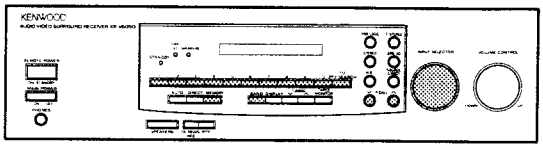


③ **RT (Radio Text) display:**
Text accompanying RDS broadcast is scrolled on the displayed during reception. **"NO RT"** is displayed if the received RDS station is not accompanied with RT data.



lse the operating procedure on this page to store RDS tations automatically in preset memory. Up to 30 RDS tations can be preset and received with a simple key peration.
his unit is compatible with the RDS so it can use convenient DS functions including automatic tuning and EON reserva- on.
DS stations should be stored in the preset memory follow- ıg the procedure in "Storing RDS stations automatically in reset memory" before listening to RDS stations.



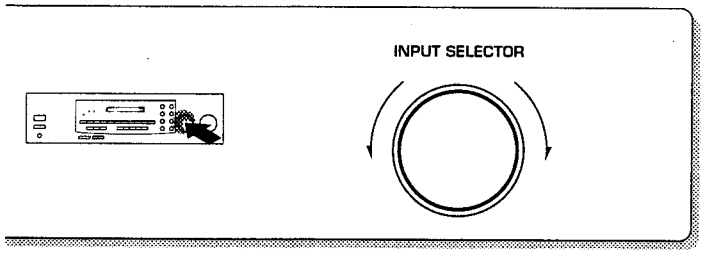


: Keys or controls to be used in this operation

Storing RDS stations automatically in preset memory (RDS AUTO MEMORY)

he following procedure allows to select stations broadcasting RDS broadcast and store them in the preset memory (up to 30 tations can be preset).

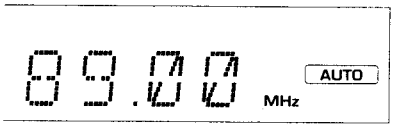
1 Set the INPUT SELECTOR to "TUNER".



The input sources are switched as follows:

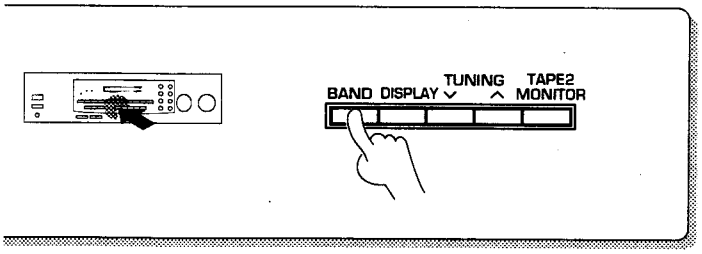
① **TUNER** (Frequency display)
② **PHONO**
③ **VIDEO1**
④ **CD**
⑤ **VIDEO2**

Frequency display



- The previously tuned frequency is displayed.

2 Set the receiving band to "FM".



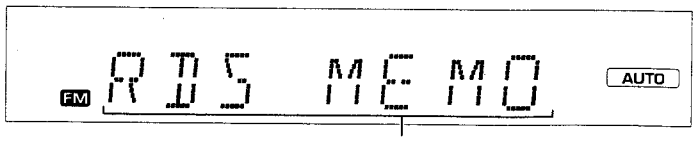
Each press of the BAND button switches the band as follows:

① **FM**
② **AM**

The **"FM"** indicator should light.

3 Start automatic preset of stations.

Press and hold the MEMORY key (for more than 2 sec.).



Blinks

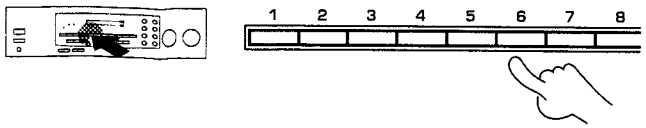
- In a few minutes, the stations with which RDS broadcast is received are stored in order beginning from preset channels **"01"** (up to 30 stations can be preset).

Note

- If stations have already been stored in preset channels, the same number of these preset channels as the number of RDS stations are cleared and replaced with the data of the newly preset RDS stations.

Receiving a preset RDS station

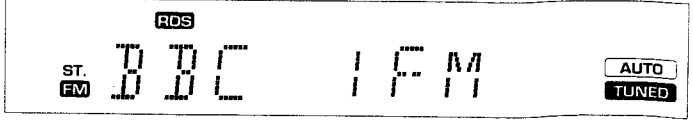
Enter the preset number (max. 30) of the desired RDS station.



Press numeric keys in the order as described below:

To enter "15" ..... [+10], [5]
To enter "20" ..... [+10], [+10], [0]

- If you commit a mistake in entering the digit of 10, press the [+10] key several times to return to the original display and re-enter the preset number from the beginning.
- Press the **DISPLAY** key to change the displayed information. →19



The RDS auto memory function assigns preset numbers beginning with 1 by giving priority to RDS stations. Therefore, when you want to store AM stations, other FM stations than RDS stations and RDS stations manually in the preset memory, execute the RDS auto memory procedure before storing other stations manually.
"Storing RDS stations automatically in preset memory (RDS AUTO MEMORY)". →20

Preparation • Set the INPUT SELECTOR to **TUNER**.

Order of presetting radio stations

AM stations and other FM stations than RDS stations are stored or overwritten after the RDS stations preset with the RDS auto memory function as shown below.

Preset No.
1 2 ..... 29 30

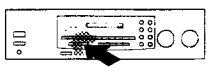
Auto memory preset of RDS stations ~ **Manual memory preset of AM and/or FM stations**

Storing radio stations manually in preset memory

❶ Select the receiving band.

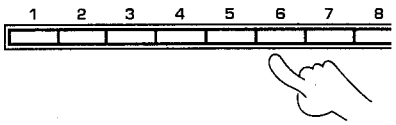
❷ Select a station or frequency.

❸ Press the MEMORY key during receiving a station.



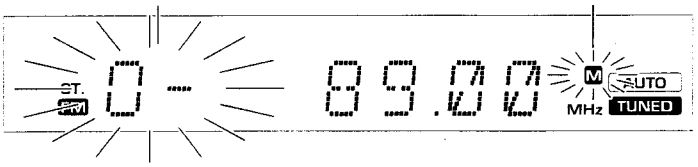
Proceed to step ❹ within 5 sec.
(If more than 5 sec. have elapsed, press the **MEMORY** key again.)

❹ Select one of the preset numbers from 1 to 30.



- Apart from the RDS auto memory function, RDS stations can also be stored manually in the preset memory.
- In the manual memory storage operation of radio stations, it may take a few minutes after the **MEMORY** key is pressed till the memory display starts to blink depending on the receiving condition.

Lights up (for 5 sec.) Lights up (for 5 sec.)

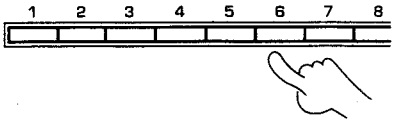


Press the numeric keys in the following order.
To store in "15" .... [+10], [5]
To store in "20" .... [+10], [+10], [0]

- Repeat steps ❶,❷,❸,❹ for each of the stations to be stored in memory.
- If a station is stored in a preset number which has already stored a station memory under it, the previous memory is replaced by the new memory content.
- If RDS stations are stored manually in the preset memory, the PS may not be included in the memory depending on receiving conditions.

Receiving a preset station

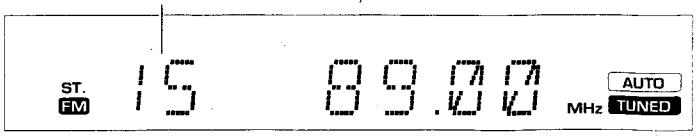
Press the preset number of the desired station.



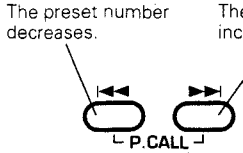
Press the numeric keys in the following order.
To recall "15" ..... [+10], [5]
To recall "20" ..... [+10], [+10], [0]

- If you make a mistake in entering the figure of 10, press the [+10] key repeatedly until the original display is shown, then enter the correct number.

Preset number stored in memory



Receiving all preset stations in order (P. CALL)



- Every time the key is pressed, the next station in the order of the preset number is received.

When you press P.CALL key, ... 1 → 2 → 3 ····· 28 → 29 → 30

When you press P.CALL key, ... 1 → 2 → 3 ····· 28 → 29 → 30

If the key is held pressed ..... Preset stations will be received successively for about half a second each.

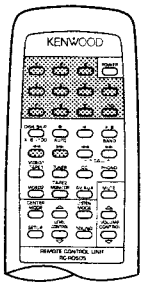
- The same operation is also available with the P.CALL keys of the main unit.

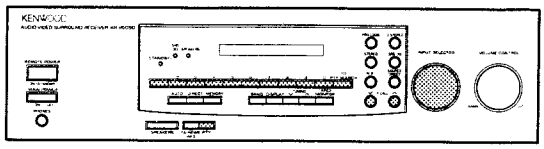
y specifying the type of program (genre) you want to listen), the tuner automatically searches for a station which is urrently broadcasting a program of the specified type.

With certain receiving conditions, it may take more than 1 minute until the search completes.

Preparation

- Execute the RDS auto memory procedure.
- Set the INPUT SELECTOR to **TUNER**.
- Set the receiving band to **FM**.

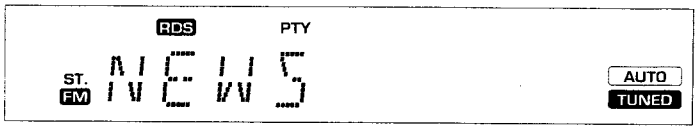




: Keys or controls to be used in this operation

Searching for a desired program type (PTY search)

1 *Select the PTY search mode.*

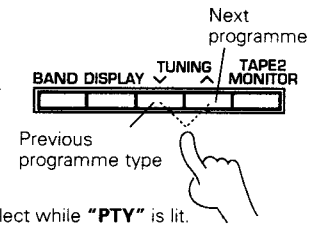


When an RDS broadcast is received, the program type is shown on the display. If no PTY data is available, or if the station is not an RDS station, "NONE" is displayed.

2 *Select the desired program type.*

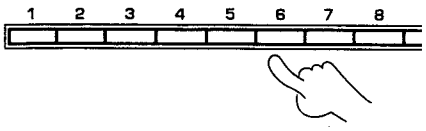
Use program type table on the right for your convenience.

Ⓐ When selecting with the TUNING keys



The TUNING key allows to select desired programme types from the 31 types. Press and hold the key and release it when the desired type is displayed.

Ⓑ When selecting with the numeric keys



The numeric keys allow to select the desired one of programme types 1 to 0 directly. If you want to select other programme type than them, use the TUNING key.

'NO DATA" is displayed if this operation is attempted before performing the RDS Auto Memory operation.

Program type table

Ⓐ	Ⓑ	Program Type Name	Display
(∨) DOWN	1	Pop Music	POP M
	2	Rock Music	ROCK M
	3	*M.O.R. Music	M.O.R. M
	4	Light Classic Music	LIGHT M
	5	Serious Classic Music	CLASSICS
	6	Other Music	OTHER M
	7	News	NEWS
	8	Current Affairs	AFFAIRS
	9	Information	INFO
	0	Sport	SPORT
		Education	EDUCATE
		Drama	DRAMA
		Cultures	CULTURE
		Science	SCIENCE
		Varied Speech	VARIED
		Weather	WEATHER
		Finance	FINANCE
		Children's programmes	CHILDREN
		Social affairs	SOCIAL A
		Religion	RELIGION
		Phone in	PHONE IN
		Travel	TRAVEL
		Leisure	LEISURE
		Jazz music	JAZZ
		Country Music	COUNTRY
		National Music	NATION M
		Oldies Music	OLDIES
		Folk Music	FOLK M
		Documentary	DOCUMENT
		Alarm Test	TEST
(∧) UP		Alarm	ALARM

*M.O.R. Music (Middle of the Road Music)

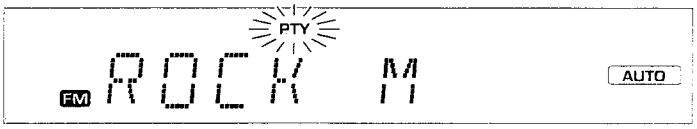
- The operations shown in Ⓐ can also be performed with the ⏪ and ⏩ keys of the remote control unit.

3 Start the search.

When searching for a Rock Music broadcast.

Display while the tuner is searching.

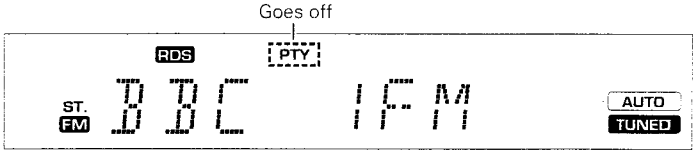
Blinks



Program type name display.

When a station is received.

Goes off



Station name display.

To change to a different program type:

Repeat steps 1, 2, 3.

- No sound is heard while **"PTY"** is blinking.
- If a program of the desired type cannot be found, **"NO PROG"** is displayed, then after several seconds the display returns to the original display.
- When a station with the selected programme type is searched, its reception starts and the type name display changes to the station name display.

The EON function manages the kinds of information broadcast by other stations than the currently received stations, so that you can make reservation of the desired kind of programme, such as traffic announcement and news, even when there is no station broadcasting it at the present. When a station starts broadcasting a programme of the reserved kind while you are listening to a station with which the EON indicator lights up, the tuner tunes the station automatically. When the station completes the programmed of the reserved kind, the tuner automatically returns to the originally-received station.

Preparation • Set the receiving band to **FM**.

Reserving reception of desired kind of programme in advance (EON reservation)

1 *Perform steps 1 to 3 of "Storing RDS stations automatically in preset memory (RDS AUTO MEMORY)".* →20

This step can be omitted if you have already executed the RDS auto memory procedure.

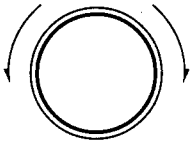
• The EON function cannot be used if all of the 30 preset stations have been stored using the procedure in "Storing radio stations manually in preset memory". Be sure to use the rds auto memory function.

2 *Set the listening volume to be used when the EON-reserved reception overrides.*

If this step is omitted, the listening volume will be identical to that used during waiting for reception of EON-reserved station.

❶ Set the INPUT SELECTOR to "TUNER".

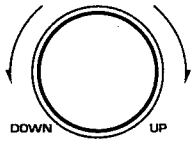
INPUT SELECTOR



❷ Press and hold the TA/NEWS/INFO. key for more than 2 seconds.

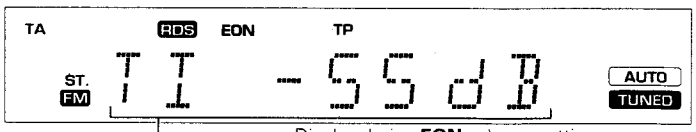
❸ Adjust the desired volume by rotating the VOLUME CONTROL.

VOLUME CONTROL

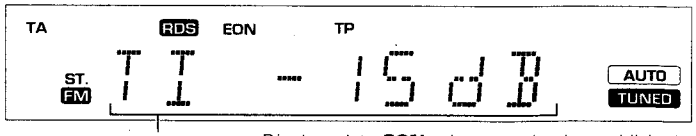


❹ Press the TA/NEWS/INFO. key to establish the set volume.

• By setting the listening volume to be used when the EON-reserved reception overrides, the desired kind of programme can be listened to at the set volume.
• The original volume resumes after the EON-reserved reception completes.
• If the volume is varied during EON-reserved reception, the original station tuned before the overriding is turned at that volume.
• To cancel the volume set for the EON-reserved reception, perform steps ❶, ❷ and ❹ on the left by skipping the operation in "❸ Adjust the desired volume by rotating the VOLUME CONTROL."



Blinks — Display during **EON** volume setting

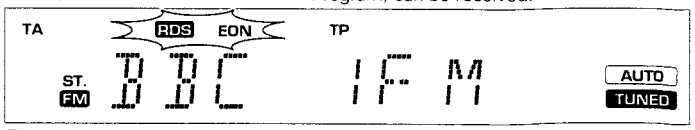


Lights — Display when **EON** volume setting is established

• After ❹, return the volume to the level for normal use.

3 *Select the desired kind of programme.*

Display when **"TA"** is selected — **"TP"** lights for stations where TP (Traffic Program) can be received.



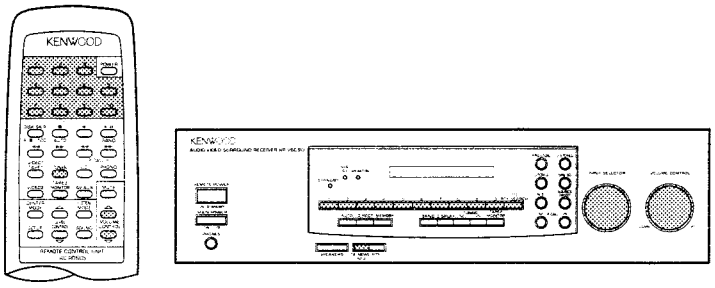
Each press of the key switches as follows:

① **TA** (Traffic Announcement)
② **NEWS** (News :Programme type)
③ **INFO.** (Information :Programme type)
④ Goes off (**EON** cancelled)

• If none of **TA, NEWS** and **INFO.** can be selected, execute the RDS auto memory procedure again. →20

TP (Traffic Programme) indication

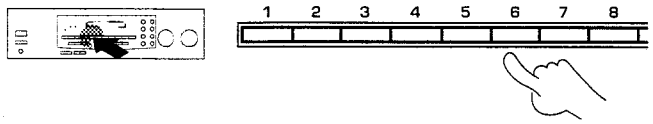
When the **"TP"** indicator is lit, this means that the presently-received station or a station in the same network is transmitting traffic information. When **"TP"** is displayed for the station being received, the traffic information of this station can be received without **EON** reservation.



: Keys or controls to be used in this operation

4 Receive one of RDS stations.

Select a station with which the EON and RDS indicators light.



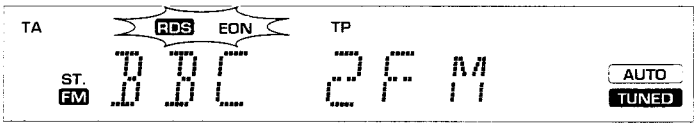
Press numeric keys in the order as described below:

To enter "15" ..... [+10], [5]

To enter "20" ..... [+10], [+10], [0]

- If you commit a mistake in entering the digit of 10, press the [+10] key several times to correct.

Display when **"TA"** is selected



- If you want to reserve **TA**, receive a station with which the **TP** indicator lights.
- When **"EON"** does not light although an RDS station is received, that station is not transmitting EON data. Please select a different station.

5 Wait for a reserved reception to start.

Leave the station with which the EDN and RDS indicators light tuned in. The tuner stands by for the reception provided that the power is left ON.

To keep listening to a tuner station:

Receive a station with which the **"EON"** and **"RDS"** indicators light.

To listen to other source than tuner:

① While keeping the tuner tuned into a station with which the **"EON"** and **"RDS"** indicators light, select the desired source with the **INPUT SELECTOR**.

② Even when the INPUT SELECTOR is set to other source than TUNER, it is switched automatically to **TUNER** when EON-reserved broadcast starts.

In this period, the source selected in ① continues to be played but no sound is heard.

③ When the EON-reserved reception completes, the INPUT SELECTOR returns to the previous input source.

- When the power is OFF, the EON function does not operate.
- If an EON reserved station overrides analog recording, the overriding radio station will be recorded.
- When the transmission of the selected program contents ends in case of automatic reception with the EON function, return will be made to the status directly before operation of the EON function.

When waiting for information while listening to a RDS station without the EON function

If the **"EON"** indicator does not light in steps 4 and 5 and the desired kind of information has already been selected, the information from only the station being received will be waited for.

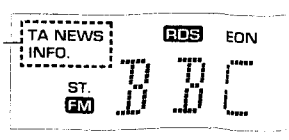
To cancel EON reservation

Turn the "TA", "NEWS" and "INFO." indicators off.

Each press of the key switches as follows:

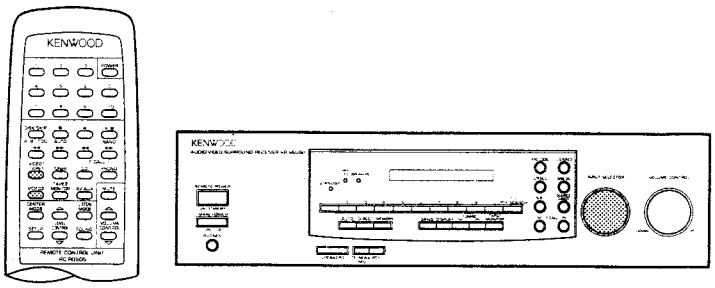
① **TA**
② **NEWS**
③ **INFO.**
④ Goes off

Should be OFF.



Operation of video components

For the connections and operations, also read carefully the instruction manuals of the video components. →4

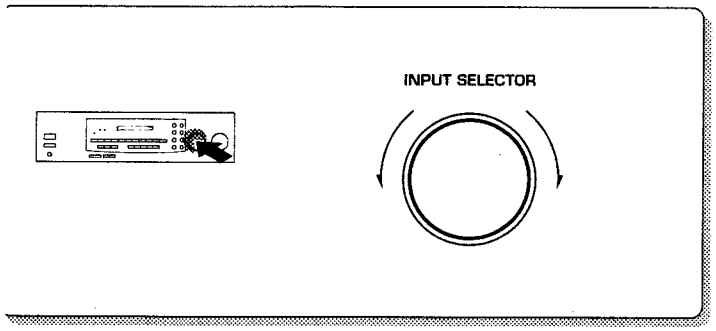


▒▒ : Keys or controls to be used in this operation

Playback of videotape

1 ***Turn the power of the monitor TV ON.***

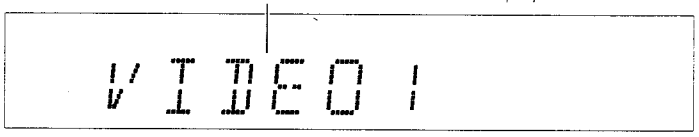
2 ***Select the VIDEO1 or VIDEO2 input.***



The input sources are switched in the following order:

→ ①**TUNER** (frequency display)
②**PHONO**
③**VIDEO1** (TAPE1 or MD)*1
④**CD**
⑤**VIDEO2** →

"VIDEO1" or **"VIDEO2"** should be displayed.



- Select the input to which a video deck is connected.
- *1: How to switch the display →12 →16
- For the operations of the monitor TV and video deck, refer to their instruction manuals.

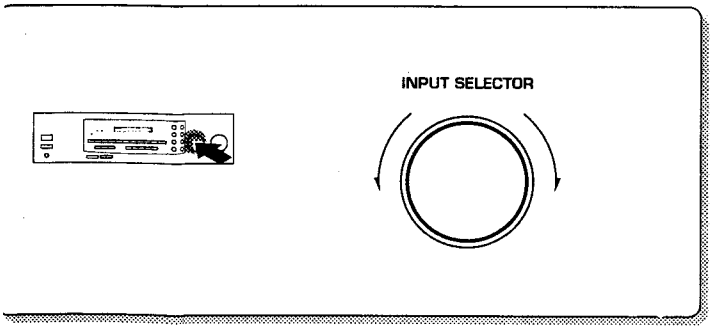
3 ***Play the video deck.***

Recording of video source (VIDEO 2→VIDEO 1)

1 ***Connect the video source component to be played.***

- Connect the component to be played to the **VIDEO 2** jacks.
- The connectable components include a video deck (playback only), video camera (playback only), LD player or DBS tuner.

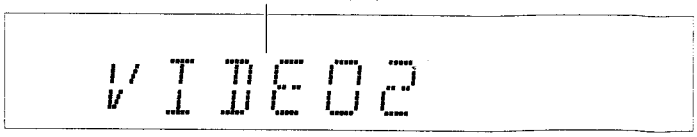
2 ***Select the VIDEO 2 input.***



The input sources are switched in the following order:

→ ①**TUNER** (frequency display)
②**PHONO**
③**VIDEO1** (TAPE1 or MD)
④**CD**
⑤**VIDEO2** →

"VIDEO2" should be displayed.



3 ***Play the source component.***

4 ***Start recording on the recording video deck.***

- Start recording with the video deck which is connected to the **VIDEO 1** jacks.
- For the caution in EON reservation. →25

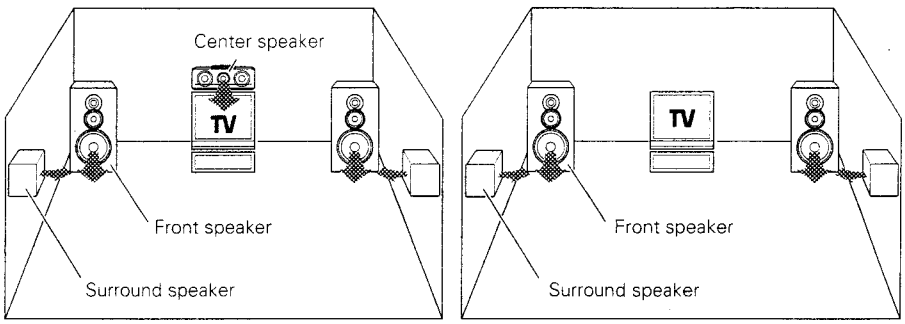
Presence play

The surround modes allow you to enjoy the feeling of presence in music. Select the mode according to the source or components played. For the connections of the surround and/or center speakers, refer to "Connection of speakers". →6

DOLBY PRO LOGIC surround mode

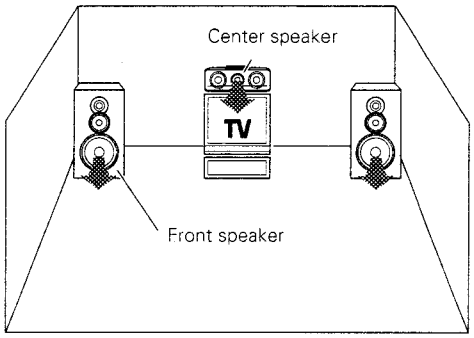
Video, DVD and LD software programs carrying the DOLBY SURROUND mark contain recording of the same Dolby Surround data as those used in movie theaters.
The DOLBY PRO LOGIC surround mode uses the Dolby Surround data and brings into home a similar sound field with full of presence to movie theatres.
To use this mode, connect the surround (and center) speakers.

In case center speaker is not used



DOLBY 3 STEREO mode

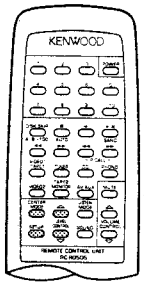
If the left and right speakers are installed apart from each other, the center acoustic image (words, etc.) may vary depending on the listener's position. The DOLBY 3 STEREO mode provides an improved positioning of the center acoustic image regardless of the listening position.
Use this mode when playing videotape, DVD or LD software carrying the DOLBY SURROUND mark.
To use this mode, connect the center speaker.

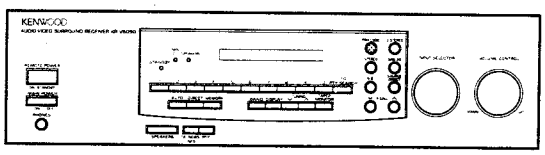


Recommended speaker installation

It is recommended that the surround speakers are installed straight to the left and right of the listening position or slightly behind, at a height of about 1 meter higher than the listener's ears. Each surround speaker should be installed so that the longer sides are horizontal.

To improve the feeling of presence in the surround modes, various parameters of each surround mode can be set up according to the speaker system used as well as to the environmental of the listening room. The following procedure let you set the parameters of the surround mode (DOLBY PRO LOGIC, DOLBY 3 STEREO).
Once the settings have been done, it is held in memory so readjustment is not necessary even after the mode has been changed to other modes.

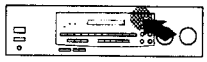




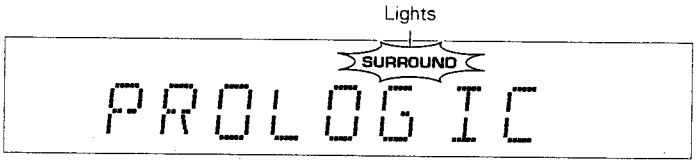
▒ : Keys or controls to be used in this operation

Adjustments for surround play

1 Select the DOLBY PRO LOGIC surround mode.



- Select a surround mode according to the played source and your system components.



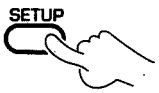
2 Select the CENTER MODE.

Each press of **CENTER MODE** key switches the modes as follows:

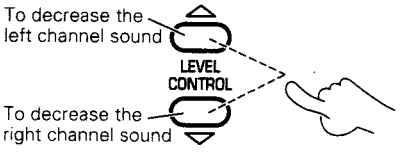
- ① **NORMAL** : When the center speaker is a compact speaker.
- ② **WIDEBAND** : When the center speaker is a large speaker.
- ③ **PHANTOM** : When no center speaker is used.

3 Adjust the front speaker balance.

❶ Press the SETUP key (on the remote control unit).



❷ Adjust the front speaker (left & right) levels so that the left and right levels are identical.

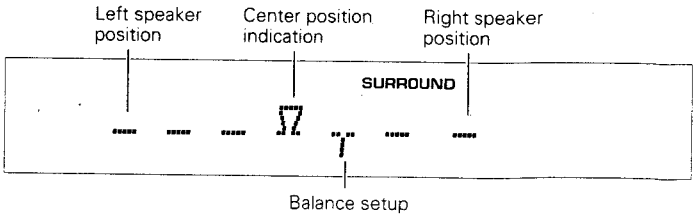


❸ Press the SETUP key again to establish the setup.
After this, the unit enters the condition for "4 Adjust the volume level of each speaker".

Adjustment procedure: Each press of the **SETUP** key switches the adjusted items as shown below.

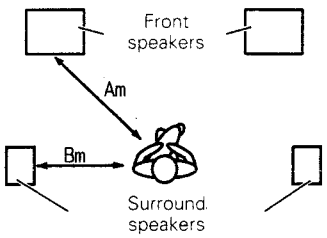
- 3 Adjusting the front speaker balance
- 4 Adjusting the volume level of each speaker
- 5 Adjusting the delay time
- End of setup

To cancel setup in the middle, press the **SETUP** key repeatedly until the setup mods is cancelled.

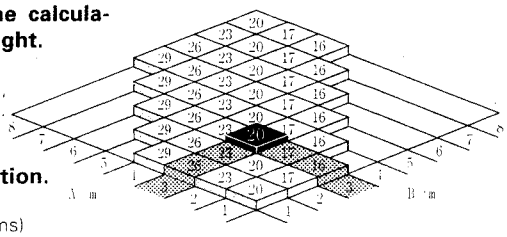


How to calculate the proper delay time

Assuming that the distance from the front speakers is A meters and that from the surround speakers is B meters:



1. **Use the delay time calculation chart on the right.**
   Example:
   When A = 3 m, B = 3 m,
   the delay time is 20 ms.



2. **Use the following formula for calculation.**
   Delay time =
   20 + 3 × (A - B) (Unit: ms)

What is delay time?

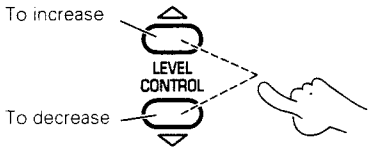
The sound entering the ears include the direct sound coming from the sound source and the indirect sounds reflected from the walls, floor, ceiling, etc. The indirect sounds are delayed because they travel longer distance required for reflection before they reach the ears. The delay time is the difference in time between the direct sound and indirect sounds.

4 Adjust the volume level of each speaker.

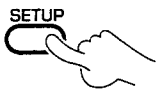
❶ **Ensure that "TEST L" is displayed. Test tone will be output from each speaker.**

❷ **Adjust the volume levels of the center speaker and surround speakers with reference to the front speaker (left & right) levels.**

(1) While test tone is output from the speaker(s) to be adjusted,
(2) Adjust the speaker level.



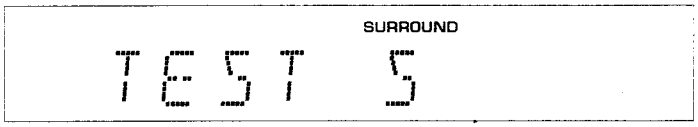
❸ **After having adjusted all of the speaker levels, establish the setup.**



After this, the unit enters the condition for "5 Adjust the delay time".

- Noise-like test tone moves across speakers at intervals of 1.5 seconds.

TEST L (Front speaker, left)
TEST C (Center speaker)
(Only when **NORMAL** or **WIDE BAND** is selected in step 2)
TEST R (Front speaker, right)
TEST S (Surround speakers)
(Only when **PRO LOGIC** is selected in step 1)



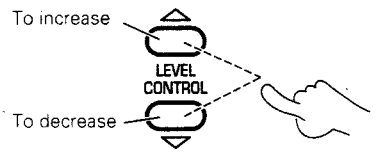
Display when test tone is output from surround speakers

- Be sure to adjust from the listening position.
- Each press of a **LEVEL CONTROL** key varies the level by 1 dB.
- The volume level can be adjusted in the range from -10 to +10 dB.
- The front speaker (left & right) levels cannot be varied with the **LEVEL CONTROL** keys.
- Adjust the volume level from each of the center speaker and surround speakers while test tone it output from the corresponding speaker.

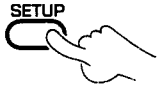
5 Adjust the delay time.

❶ **Ensure that the delay time adjustment display is displayed.**

❷ **Adjust the delay time.**

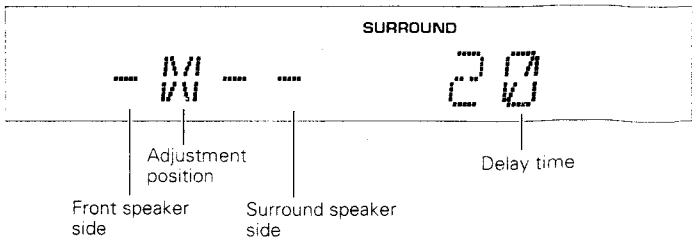


❸ **Establish the setup.**

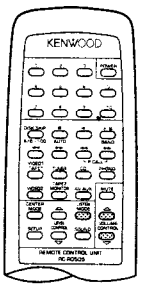


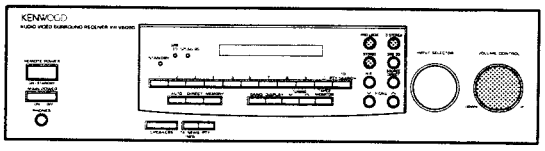
This is the end of setup (the unit returns to the condition before starting the setup operations).

- Check the proper delay time for your listening room by referring to "How to calculate the proper delay time".
- Select an integer value which is closest to the value obtained with "How to calculate the proper delay time".
- The delay time can be adjusted to 15, 20, 25 or 30 ms.



When playing videotape (DVD or LD) software carrying the DOLBY SURROUND mark, a sound field with enhanced surround effects can be enjoyed by using the DOLBY PRO LOGIC or DOLBY 3 STEREO mode.
Be sure to complete "Adjustments for surround play" prior to starting playback in one of these surround modes.
→28



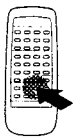


: Keys or controls to be used in this operation

Surround play

1 Select one of the surround modes.

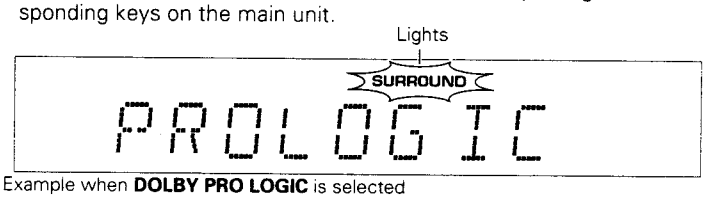
❶ **Select the desired surround mode.**



Each press of **LISTEN MODE** key switches the modes as follows:

→ **①STEREO**
②PRO LOGIC
③3 STEREO

- The surround modes can also be selected directly using the corresponding keys on the main unit.



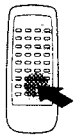
Example when **DOLBY PRO LOGIC** is selected

2 Play a video software program.

3 Adjust the volume.

To cancel the SURROUND play

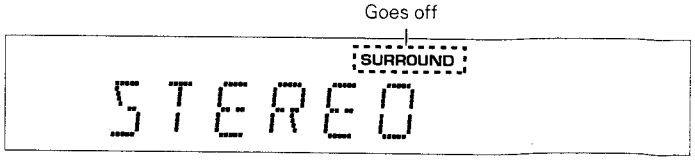
Main unit



Remote control unit

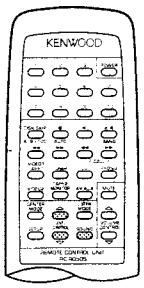
On the remote control unit, the following modes are switched every time the **LISTEN MODE** key is pressed.

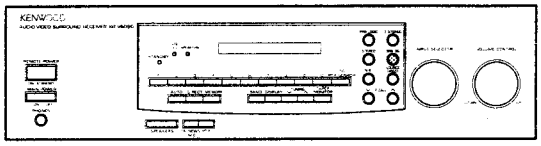
→ **①STEREO**
②PRO LOGIC
③3 STEREO



Manufactured under licence from Dolby Laboratories Licensing Corporation.
"Dolby", "Pro Logic" and the double - D symbol are trademarks of Dolby Laboratories Licensing Corporation.

he Sound Retrieval System is an epochal system which roduces a three-dimensional sound space by applying the ıost suitable processing to the sound signal on the basis of ıe human listening mechanism. This permits real depth and ound location, considered as difficult to realize with con-entional 2-channel stereo (general stereo). A sufficient ffect can be obtained for any source (CD, tape, broadcasts, tc.).





: Keys or controls to be used in this operation

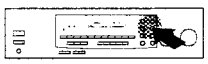
SRS 3D Stereo (Sound Retrieval System)

Adjusting the tone.

❶ Ensure that the S.DIRECT indicator is not lit.

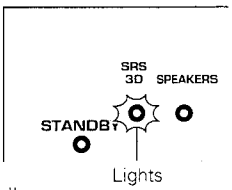
Goes off

❷ Turn the SRS 3D stereo ON.



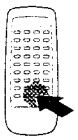
Each press of the key switches the modes as follows:

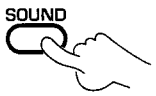
① **SRS 3D** is lit
..... SRS 3D STEREO ON
② **SRS 3D** is not lit
..... SRS 3D STEREO OFF



❸ Adjust the effect strength (level).

(1) "CENTER" or "SPACE" should be displayed.





Each press of the key switches the modes as follows:

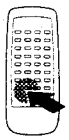
① **CENTER** : Mode for adjusting the depth of SRS 3D.
② **SPACE** : Mode for adjusting the expansion of SRS 3D.
③ End of setting

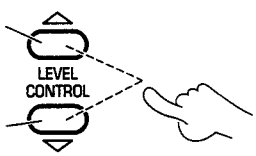
Increasing the "CENTER" level enhances the feeling of depth around the center.

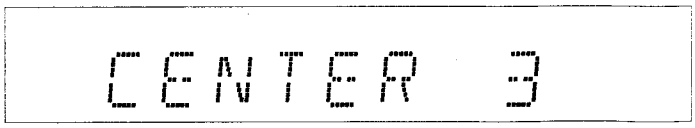
Increasing the "SPACE" level makes the sound expansion wider.

- The BASS, MIDDLE and TREBLE adjustments are not available while the SRS 3D Stereo is ON. For the BASS, MIDDLE and TREBLE adjustment procedures. →13

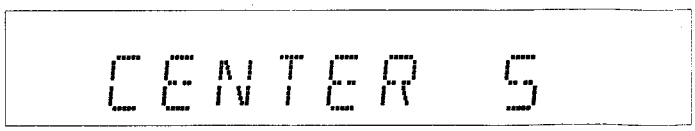
(2) Adjust the level.







Display when CENTER is selected Level display



The level value varies

- Adjustment is possible in the range from 1~7.
- Please set as desired according to the titles being played back etc.

Even if the sound is recorded while the SRS 3D stereo effect is applied, the effect is not recorded together with the source sound.

In case of difficulty

What appears to be a mulfunction may not always be serious. If your unit should not perform as expected, consult the table below to see if the problem can corrected before seeking help from your dealer or service representative.

Operation to reset

The microcomputer may fall into malfunction (impossibility to operate, erroneous display, etc.) when the power cord is unplugged while power is ON or due to an external factor. In this case, execute the following procedure to reset the microcomputer and return it to normal condition.

While holding the REMOTE POWER key depressed, press the MAIN POWER switch to ON.

- Please note that resetting the microcomputer clears the contents stored in and returns to the condition when it left the factory.

Amplifier

Symptom	Cause	Remedy
Sound is not output or the volume level is low.	• The speaker cords are disconnected. • MUTE is ON. (The MUTE ON indicator is blinking) • The **SPEAKERS** keys are set to OFF. • The **TAPE 2 MONITOR** key is set to ON.	• Connect them properly referring to "Connection of speakers". →6 • Press the **MUTE** key to OFF. →15 • Set the **SPEAKERS** key to ON. →12 • Set the **TAPE 2 MONITOR** key to OFF. Set the input selector to the position other than tuner.
The STANDBY indicator blinks and sound is not output.	• Speaker cords are short-circuited.	• Turn the power off, eliminate the short-circuiting, then turn on the power again. →6
Sound is not output from one of the speakers.	• The speaker cord is disconnected. • The BALANCE control is set to an extreme position.	• Connect it properly referring to "Connection of speakers". →6 • Adjust the Left/Right balance. →13
Sound is not output from the surround speaker and/or center speaker, or their sound is very small.	• The surround speaker cords and/or center speaker cord are disconnected. • The Surround play mode has not been engaged. • The surround and center speaker levels are set to the minimum positions.	• Connect them properly referring to "Connection of speakers". →6 • Set the presence mode. →28 • Adjust the surround and center speaker levels.
A hum noise is generated when the PHONO input is selected.	• The audio cord from the turntable is not inserted securely into the PHONO jacks. • The turntable is not grounded.	• Insert the audio cord plugs securely into the PHONO jacks. →4 • Connect the grounding wire to the GND terminal on the rear panel.
System control is not available when TAPE1 or MD is selected.	• "TAPE1" or "MD" is not displayed.	• Switch the display to TAPE 1 or MD. →12 →16
System control is impossible.	• The remote control mode was switched between XS-8 and SL-16 while the MAIN POWER switch was ON.	• Set the MAIN POWER switch to OFF before switching the mode between XS-8 and SL-16. →5
Display is dimly lit.	• The setting is not correct.	• Adjust the brightness with the **DISPLAY** key. →9

Tuner

Symptom	Cause	Remedy
Radio stations cannot be received.	• No antenna is connected. • The broadcast band is not set properly. • The frequency of the desired station is not tuned.	• Connect an antenna. →7 • Set the broadcast band properly. →17 • Tune the frequency of the desired station. →17
Interference.	• Noise due to ignition noise of an automobile. • Noise due to an influence from an electric appliance. • Noise due to a nearby TV set.	• Install the outdoor antenna away from the road. • Turn off the power to the appliance. • Install the system farther away from the TV set.
A station which was preset cannot be received by pressing the corresponding numeric key.	• The preset station belongs to a frequency that cannot be received. • The preset memory was cleared because the power cord had been unplugged for a long period of time. • The TUNER input is not selected.	• Preset a station with a receivable frequency. →20 →21 • Preset the station again. →20 →21 • Select the TUNER input.

Remote control unit

Symptom	Cause	Remedy
Remote control operation is not possible.	• Batteries are exhausted. • The remote control unit is too far away from the main system, controlling angle is too large, or there is an obstacle in between. • The audio cords and system control cords are not connected properly. • The source component to be operated does not contain the tape(s) or CD. • An attempt is made to play a tape which is being recorded in the cassette deck.	• Replace with new batteries. →10 • Operate the remote control unit within the controllable range. →11 • Connect properly referring to "System connection". →4 • Place the tape(s) or CD in the source component to be played. • Wait until the recording is completed.

Memory backup function

Please note that the following items will be deleted from this unit's memory if the power cord is disconnected from the AC outlet or the main power switch is turned off for approximately three days.

- The power setting is cleared and the power is set to OFF.
- The input selection is cleared and the TUNER input is selected.
- The volume setting is cleared and the volume is set to -80 dB.
- The receiving band setting is cleared and the FM band is selected.
- The frequency setting is cleared and 87.5 MHz is selected.
- The preset station memory is cleared.

Note

Do not use contact cleaners because it could cause a malfunction. Be specially careful against contact cleaners containing oil, for they may deform the plastic components.

Specifications of KR-V6090

⚠ *Caution : Read this page carefully to ensure safe operation.*

Audio section

Rated power output at the STEREO operation (DIN)
- 1 kHz, 0.7% T.H.D. at 4 Ω ..... 100 W + 100 W

Power output at the Surround operation
- Front (1 kHz, 0.7% at 4 Ω) ..... 100 W + 100 W
- Center (1 kHz, 0.7% at 4 Ω) ..... 100 W
- Surround (1 kHz, 0.7% at 4 Ω) ..... 100 W

Total harmonic distortion(1 kHz, 4 Ω) ..... 0.7% at 50 W

Signal to noise ratio
- PHONO (MM) ..... 64 dB (DIN, 50 mW output)
- CD ..... 64 dB (DIN, 50 mW output)

Input sensitivity / impedance
- PHONO (MM) ..... 3.0 mV / 47 kΩ
- CD ..... 220 mV / 47 kΩ

Output level / impedance
- Sub woofer preout ..... 2.0 V / 600 Ω

Tone controls
- BASS ..... ± 8 dB (at 100 Hz)
- MIDDLE ..... ± 8 dB (at 900 Hz)
- TREBLE ..... ± 8 dB (at 10 kHz)
- N.B. circuit ..... + 5 dB (80 Hz)

Video section

VIDEO inputs / outputs
- (composite) ..... 1 Vp-p/75 Ω

FM Tuner section

Tuning frequency range ..... 87.5 MHz~108 MHz

Usable sensitivity (DIN)
- MONO ..... 1.2 µV (at 75 Ω) / 13.2 dBf (40 kHz dev., S/N 26 dB)
- STEREO ..... 44 µV (at 75 Ω) / 44.2 dBf (46 kHz dev., S/N 46 dB)

Total harmonic distortion at 1 kHz (DIN)
- MONO ..... 0.3% (65.2 dBf input)
- STEREO ..... 0.5% (65.2 dBf input)

Signal to noise ratio (DIN weighted at 1 kHz, 40 kHz dev.)
- MONO ..... 65 dB (65.2 dBf input)
- STEREO ..... 60 dB (65.2 dBf input)

Selectivity (DIN ± 300 kHz) ..... 64 dB

Stereo separation (DIN, 1 kHz) ..... 40 dB

Frequency response ..... 30 Hz~15 kHz, + 0.5 dB, – 3.0 dB

AM Tuner section

Tuning frequency range ..... 531 kHz ~ 1,602 kHz

Usable sensitivity
- (30% mod., S/N 20 dB) ..... 20 µV / (700 µV / m)

Signal to noise ratio
- (at 30% mod. 1mV input) ..... 48 dB

General

Power consumption ..... 250 W

⚠ **AC outlet**
- SWITCHED ..... 1: (50 W max)

Dimensions ..... W:440 mm
H:127 mm
D:389 mm

Weight (net) ..... 9.0 kg

Notes

1. KENWOOD follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.
2. Full performance may not be exhibited in extremely cold locations (below 0 deg.C).

Specifications of KR-V5090

⚠ Caution : Read this page carefully to ensure safe operation.

udio section

ated power output at the STEREO operation
)IN)
1 kHz, 0.7% T.H.D. at 4 Ω ..... 50 W + 50 W
ower output at the Surround operation
Front (1 kHz, 0.7% at 4 Ω) ..... 50 W + 50 W
Center (1 kHz, 0.7% at 4 Ω) ..... 50 W
Surround (1 kHz, 0.7% at 4 Ω) ..... 50 W
otal harmonic distortion (1 kHz, 4 Ω) ..... 0.03% at 25 W
ignal to noise ratio
PHONO (MM) ..... 65 dB (DIN, 50 mW output)
CD ..... 66 dB (DIN, 50 mW output)
put sensitivity / impedance
PHONO (MM) ..... 3.0 mV / 47 kΩ
CD ..... 220 mV / 47kΩ
one controls
BASS ..... ± 8 dB (at 100 Hz)
MIDDLE ..... ± 8 dB (at 900 Hz)
TREBLE ..... ± 8 dB (at 10 kHz)
N.B. circuit ..... + 5 dB (80 Hz)

ideo section

IDEO inputs / outputs
(composite) ..... 1 Vp-p/75 Ω

FM Tuner section

Tuning frequency range ..... 87.5 MHz~108 MHz
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MONO ..... 1.2 µV (at 75 Ω) / 13.2 dBf (40 kHz dev., S/N 26 dB)
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AM Tuner section

Tuning frequency range ..... 531 kHz ~ 1,602 kHz
Usable sensitivity
(30% mod., S/N 20 dB) ..... 20 µV / (700 µV / m)
Signal to noise ratio
(at 30% mod. 1mV input) ..... 48 dB

General

Power consumption ..... 200 W
⚠ AC outlet
SWITCHED ..... 1: (50 W max)
Dimensions ..... W:440 mm
H:127 mm
D:389 mm
Weight (net) ..... 6.8 kg

Notes

1. KENWOOD follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.
2. Full performance may not be exhibited in extremely cold locations (below 0 deg.C).